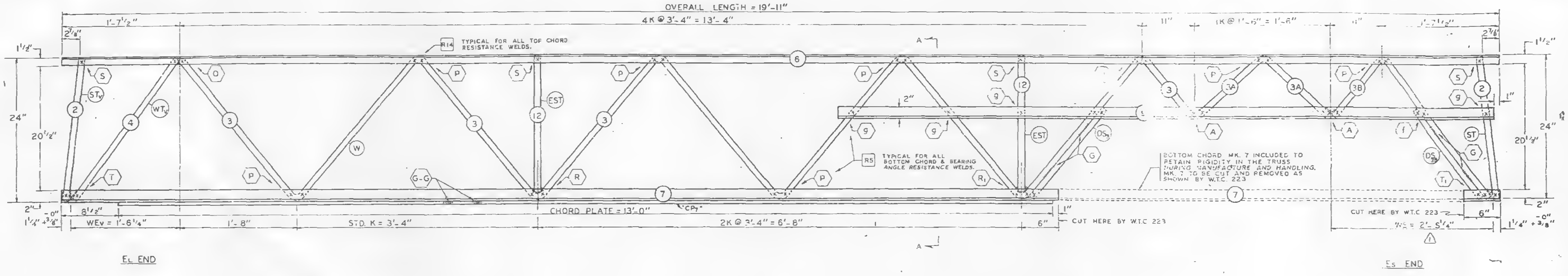
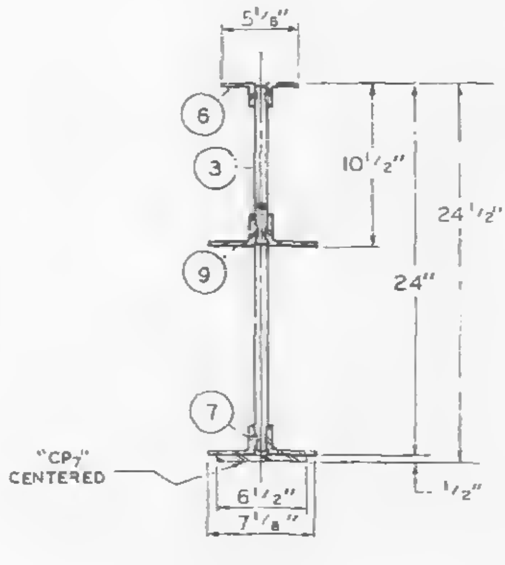
0600-0677

WTCI-131-LERA

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL "K"	3'-4"	± 1 / 4"
WEB DEPTH	23 7/8"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"





SECTION A-A

NO.	DATE	REVISION	BY
1	5-15-69	AS NOTED	G.D.C.

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (IIIIIII).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., A.
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., RS.
SEE SHEET ST 281 FOR CHORD PLATE DETAILS.

PAINT

LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		VERTICAL "EST" STRUT					CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
24T10H - 1911	6	A242	2"x1 1/2"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	2'-8 3/8"	4 1/8K @ 3'-4" = 14'-3"			12	A242	2	1.14	1'-10 7/8"	CP7	A36	6 1/2"x1/2"	13'-0"	DS3	A242	1.14	1'-6 3/4"
									3A	A242	1.14	2'-4 3/4"	1K @ 1'-6" = 1'-6"															
									3B	A242	1.14	3'-8 1/4"	5/8K @ 3'-4" = 2'-6 1/2"															

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH	l	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH
	24T10H - 1911	2	A242	1.14	1'-11 3/4"	2'-5 1/4"	9	A36	3"x2"x.33"	9'-1 1/2"	DS3B	A242	1.14	1'-6 3/4"

EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv	WEB "WTv"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK	TYPE STEEL	DIA.	LENGTH
	24T10H - 1911	2	A242	1.14	1'-11 3/4"	1'-6 1/4"	4	A242	1.14	2'-5 1/2"

REF. DRWGS.	
7-A82-18	10-4-68
7-A83-30	10-4-68
7-A83-31	10-4-68
7-A83-24	8-15-68
7-A84-17.7	10-4-68
7-A84-17.1	10-4-68
SA-124	1-8-69
7-A82-1	1-6-69

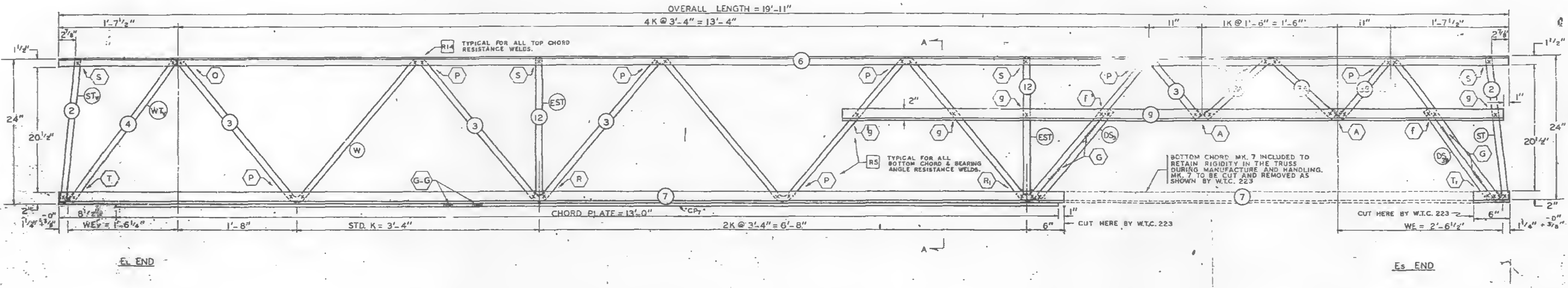
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10H x 19'-11" LONG
WORLD TRADE CENTER TOWERS A & B

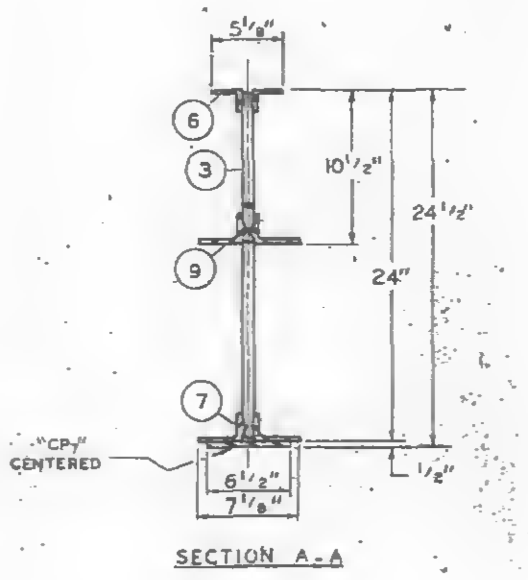
FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR PONTA... DATE 6/4/69
APPROVED FOR FABRICATION DATE
FOR FABRICATOR
LACLEDE STEEL CO.
DETAILED BY A. CARL WEBER

DESIGN DRAWING NO. 7-A82-18
DRAWN BY: gdc
DATE APRIL 14, 1969
CHECKED BY: T.M. CHURA
DATE APRIL 14, 1969
FABRICATION CONT. NO. W.T.C. 221
PLATE
IN CHARGE OF PROD. DEV.
SHEET NO. ST 210H

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL "K"	3'-4"	± 1 / 4"
WEB DEPTH	23 7/8"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"



OVERALL LENGTH = 19'-11"
4 K @ 3'-4" = 13'-4"
1'-7½"
11"
1K @ 1'-6" = 1'-6"
R14 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R5 TYPICAL FOR ALL BOTTOM CHORD & BEARING ANGLE RESISTANCE WELDS.
BOTTOM CHORD MK. 7 INCLUDED TO RETAIN RIGIDITY IN THE TRUSS DURING MANUFACTURE AND HANDLING. MK. 7 TO BE CUT AND REMOVED AS SHOWN BY W.T.C. 223
CHORD PLATE = 13'-0"
"CP7"
WE1 = 1'-6¼"
1'-8"
STD. K = 3'-4"
2K @ 3'-4" = 6'-8"
6"
CUT HERE BY W.T.C. 223
WE = 2'-6½"
24"
20½"
2"
EL END
Es END
A



SECTION A-A

NO.	DATE	REVISION	BY

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (IIIIIII).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., Ⓐ.
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R5.
SEE SHEET ST 281 FOR CHORD PLATE DETAILS.

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

VOID

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		VERTICAL "EST" STRUT					CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
24T10H - 1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	~~3~~ ~~3A~~ ~~3B~~	~~A242~~ ~~A242~~ ~~A242~~	~~1.14~~ ~~1.14~~ ~~1.14~~	~~21-[illegible]~~ ~~2'-4[illegible]~~ ~~3'-[illegible]~~	[illegible]			12	A242	2	1.14	1'-10⅞"	CP7	A36	6½"x½"	13'-0"	DS3	A242	1.14	1'-6¾"

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	24T10H -1911	2	A242	1.14	1'-11¾"	2'-6½"	9	A36	3"x2"x.33"	9'-1½"	DS3E	A242	1.14	1'-6¾"

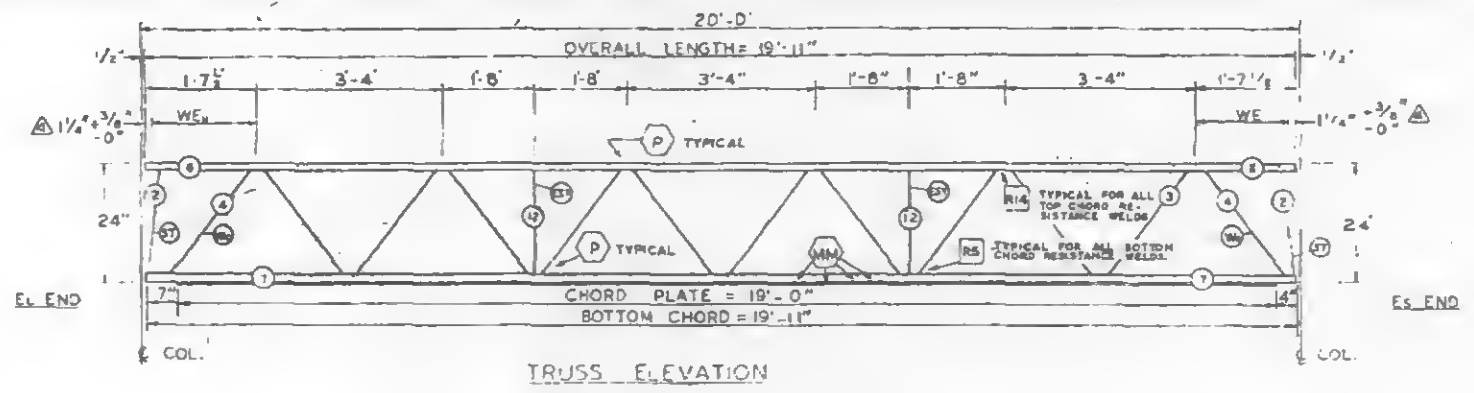
EL END	TRUSS DESIGNATION	INCLINED "STV" STRUT				WEV	WEB "WTV"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T10H -1911	2	A242	1.14	1'-11¾"	1'-6¼"	4	A242	1.14	2'-5½"

REF. DRWGS.		
	7-A82-18	10-4-68
	7-A83-30	10-4-68
	7-A83-31	10-4-68
	7-A85-24	8-15-68
	7-A86-17.2	10-4-68
	7-A84-17.1	10-4-68
	8A-124	1-6-69
	7-A82-1	1-6-69

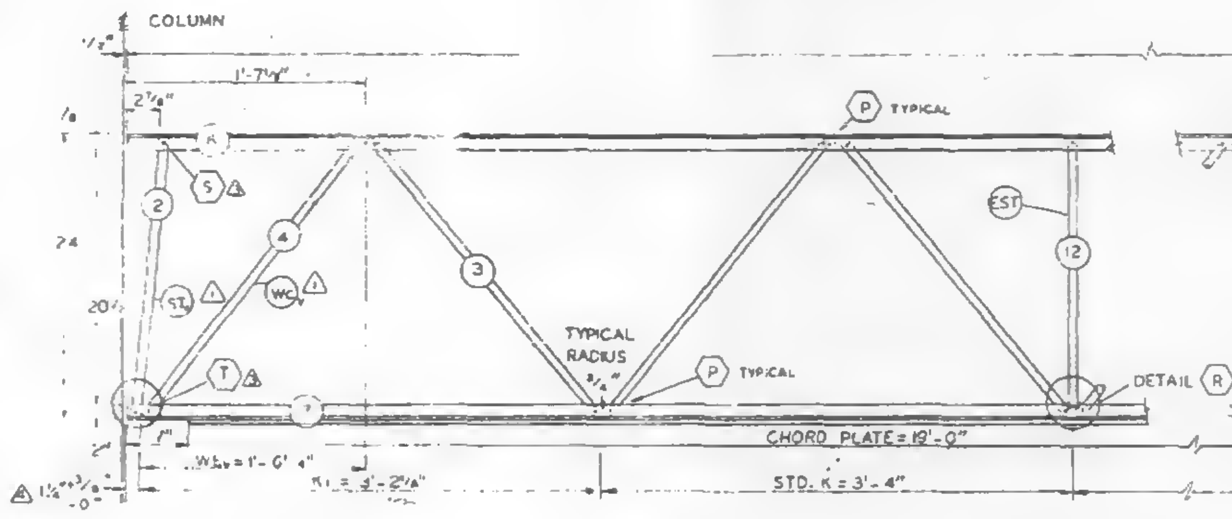
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10H 19'-11" LONG
WORLD TRADE CENTER TOWERS A & B

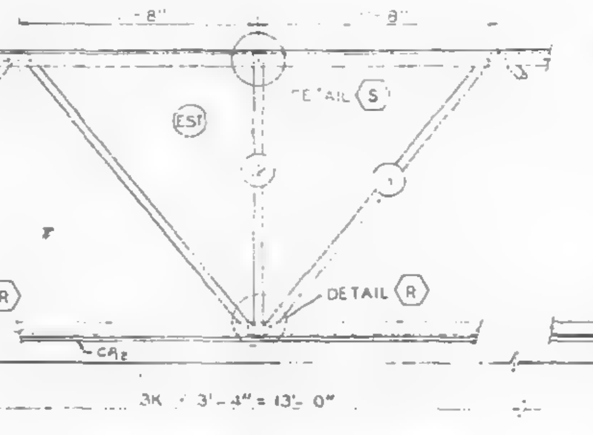
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-18
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE
DRAWN BY: [illegible] DATE APRIL 14, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.N.CHU[illegible] DATE APRIL 14, 1968
IN CHARGE OF PROD. [illegible]
DET. [illegible]
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST [illegible]



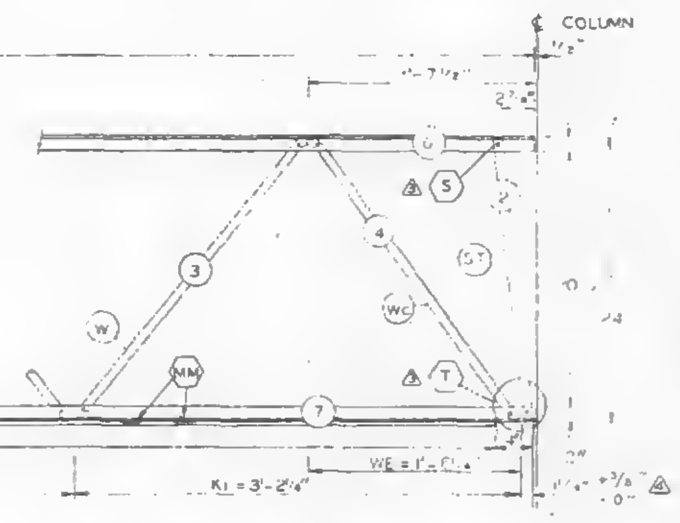
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL K	3'4"	± 1/8"
PANEL K1	3'-2 1/4"	± 1/8"
WEB DEPTH	23 1/2"	±
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (RW)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES ( )
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF DWG 7-AB2-1 4-1-68
7-AB2-5 4-12-68
7-AB4-13 1-3-68
7-AB4-15, 20 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-18 & 40 ...... 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO 1000

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2" x 1 1/2" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-8"	3	A242	1.14	25'-7 1/2"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10 7/8"	2			—	—	CP2	A36	6 1/2" x 1/2"	19'-0"

△3

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6 1/4"	2	A242	1.14	1'-11 3/4"	4	A242	1	1.14	2'-5 1/8"

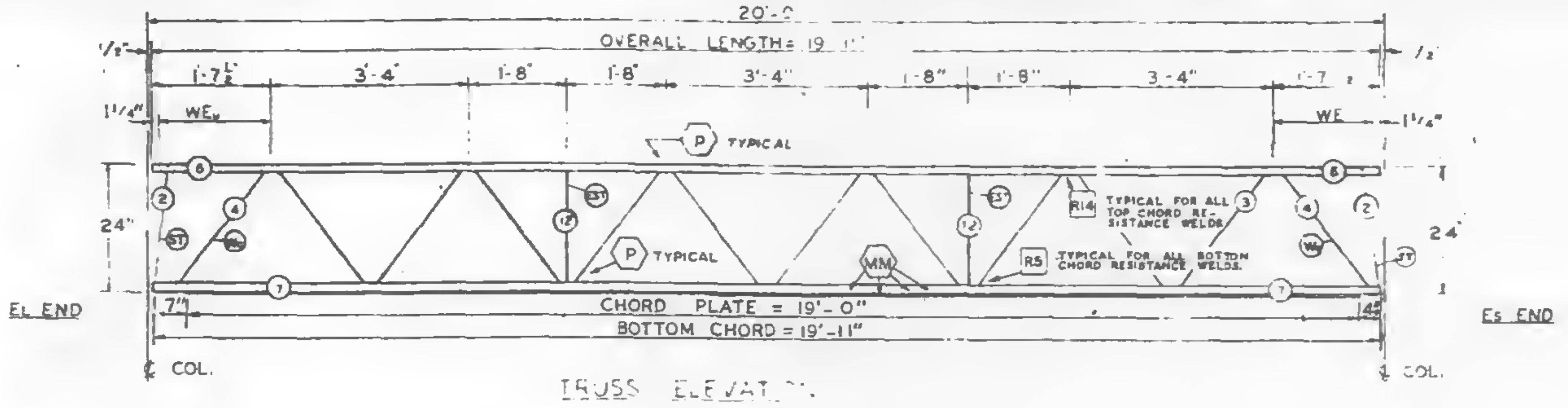
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE1	DIAGONAL "T" STRUT				△1 INCLINED "ST1" STRUT				END STIFFENER						WEB "Wc1" △1				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	—	—	1'-8 3/4"	—	—	—	—	2	A242	1.14	1'-11 1/2"	—	—	—	—	—	—	4	A242	1	1.14	2'-5 1/8"

NO.	DATE	REVISION	BY
△4	9-5-68	END DIST. ②	T.M.C.
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-28-68	AS NOTED	T.M.C.

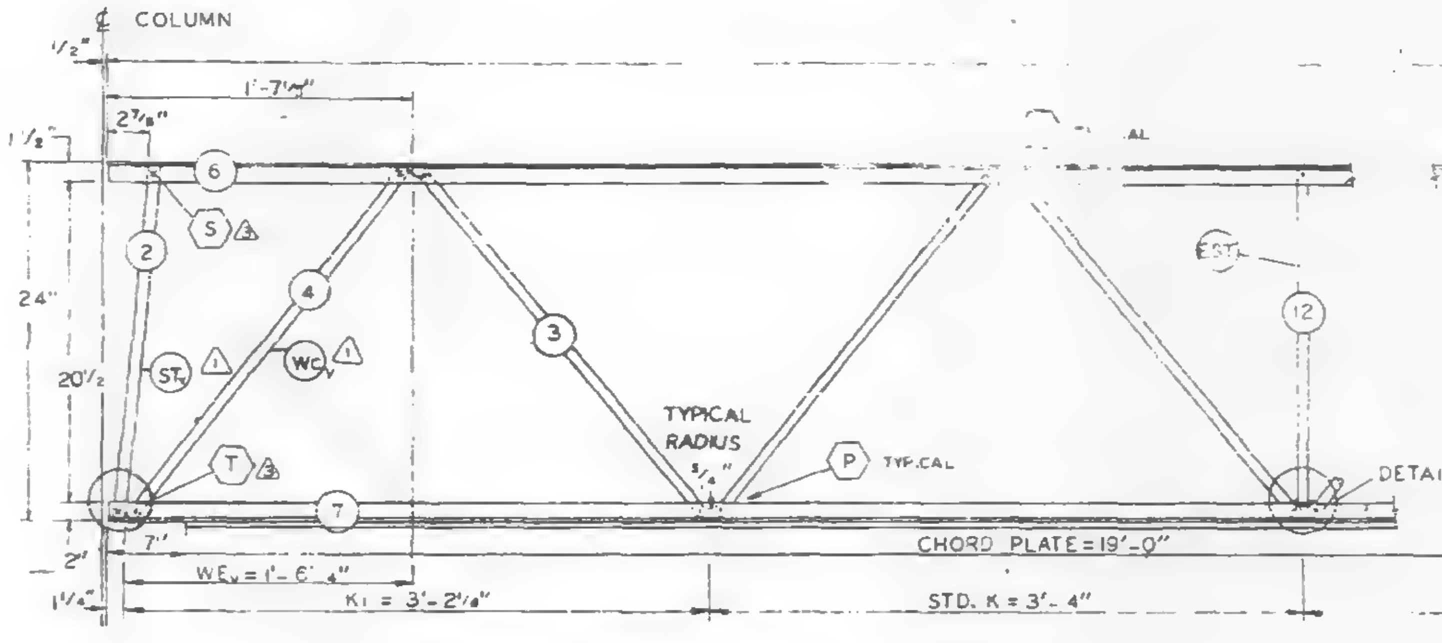
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

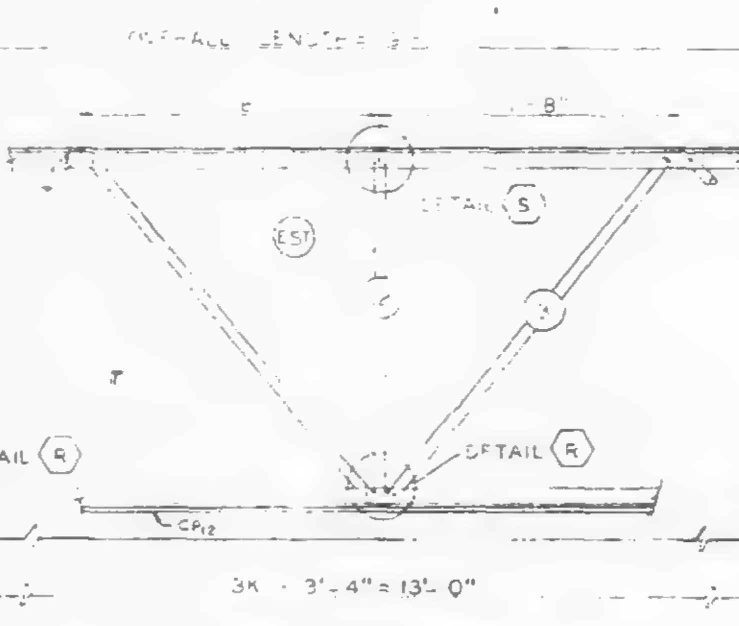
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-6
PLATE
APPROVED FOR FABRICATION BY FOR PONYA
DATE 9/10/68
DRAWN BY
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY T.M. CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.E. WEBER
LACLEDE STEEL CO.
FABRICATION CONT. NO W.T.C. 221
SHEET NO ST210



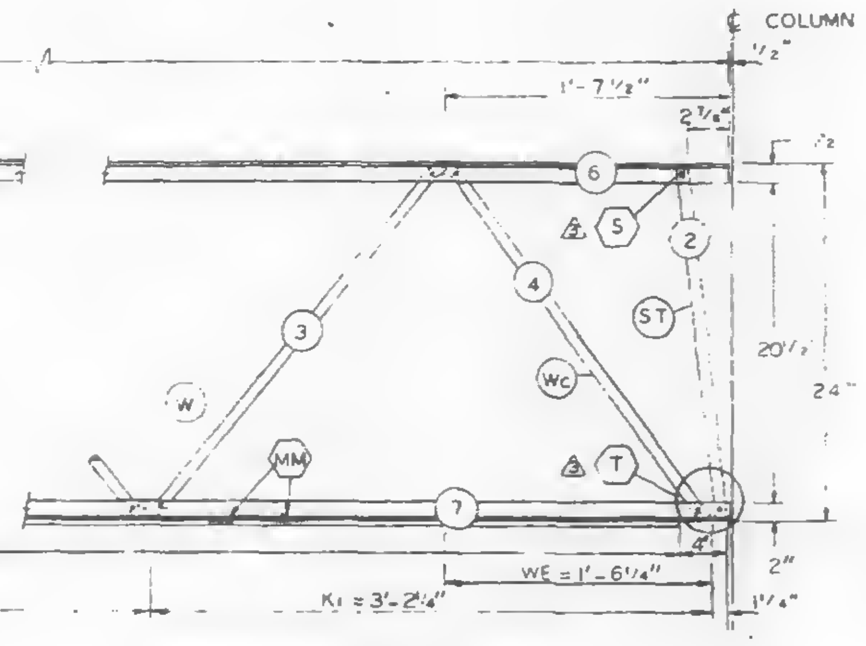
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	±⅛"
DESIGN DEPTH,	24"	±¼"
PANEL "K"	3'-4"	±¼"
PANEL "K1"	3'-2¼"	±¼"
WEB DEPTH	23⅞"	±¼"
OVERALL LENGTH	19'-11"	±⅛"

ALL PANEL POINTS RESISTANCE WELDED EXC.
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 ⚠1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 ⚠1

REF DWG.	
7-AB2-	4-1-68
7-AB2-5	4-15-68
7-AB4-15,1	1-3-68
7-AB4-15,28 & 41	1-3-68
7-AB4-38	4-1-68
7-AB4-16 & 18	5-6-68 ⚠1

PAINT
LACLEDE ELECTROCOAT
RED NO. 100

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO. OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24TID -1911	6	A242	2"x 1½"x .31"	19'-11"	7	A36	3"x 2"x .33"	19'-11"	3	A242	1.14	25'-7½" ⚠2	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CR2	A36	6½"x½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEw	DIAGONAL "T" STRUT				⚠1 INCLINED "ST" STRUT				END STIFFENER						WEB "Wc" ⚠1				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11½"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

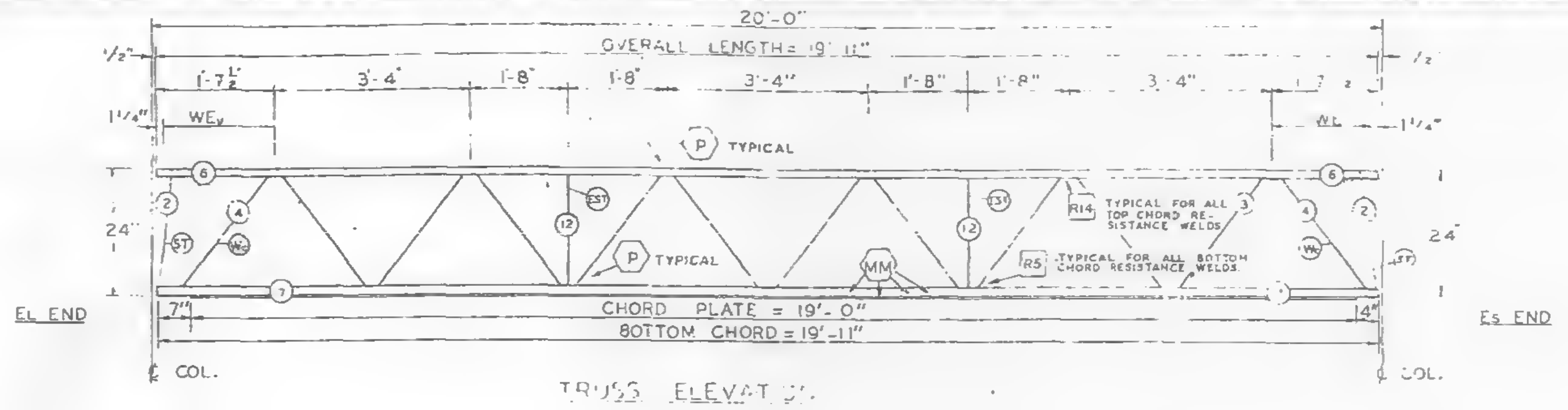
NO.	DATE	REVISION	BY
⚠3	7-8-68	AS NOTED	T.M.C.
⚠2	7-3-68	MAIN WEB	T.M.C.
⚠1	6-26-68	AS NOTED	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

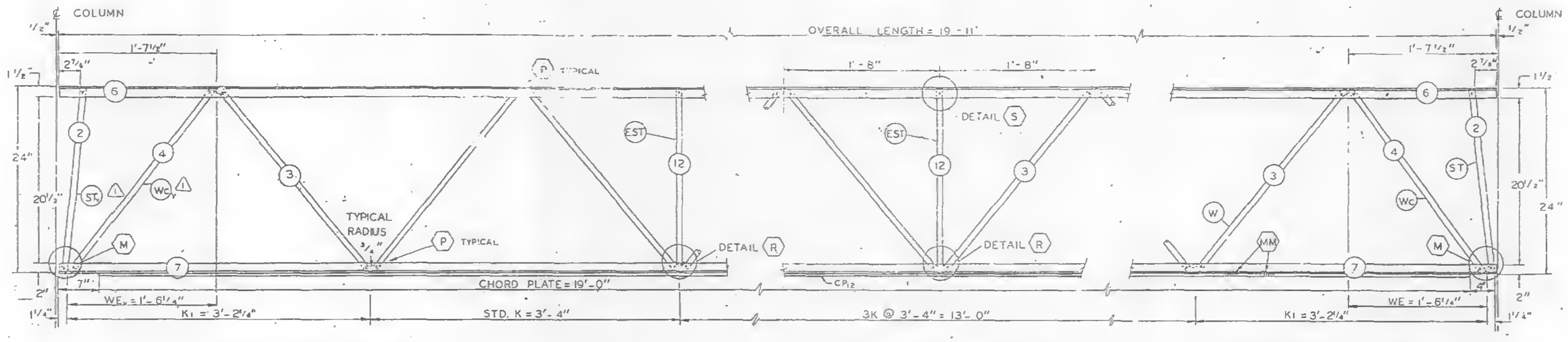
BRIDGING TRUSS 24TID x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-5	PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A	DATE 7/9/68	DRAWN BY	
		DATE MAY 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA	IN CHARGE
		DATE MAY 24, 1968	PROD.
DETAILED BY		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT210



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT ES END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/4"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie.. ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie.. [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF. DWG.		
	7-AB2-1	4-1-68
	7-AB2-5	4-15-68
	7-AB4-15.1	1-3-68
	7-AB4-19, 28 & 41	1-3-68
	7-AB4-38	4-1-68
	7-AB4-16 & 18	5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
REQ NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2" x 1 1/2" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	30'-6 1/2"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10 7/8"	2			—	—	CP2	A36	6 1/2" x 1/2"	19'-0"

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 - 1911	1'-6 1/4"	2	A242	1.14	1'-11 3/4"	4	A242	1	1.14	2'-5 1/2"

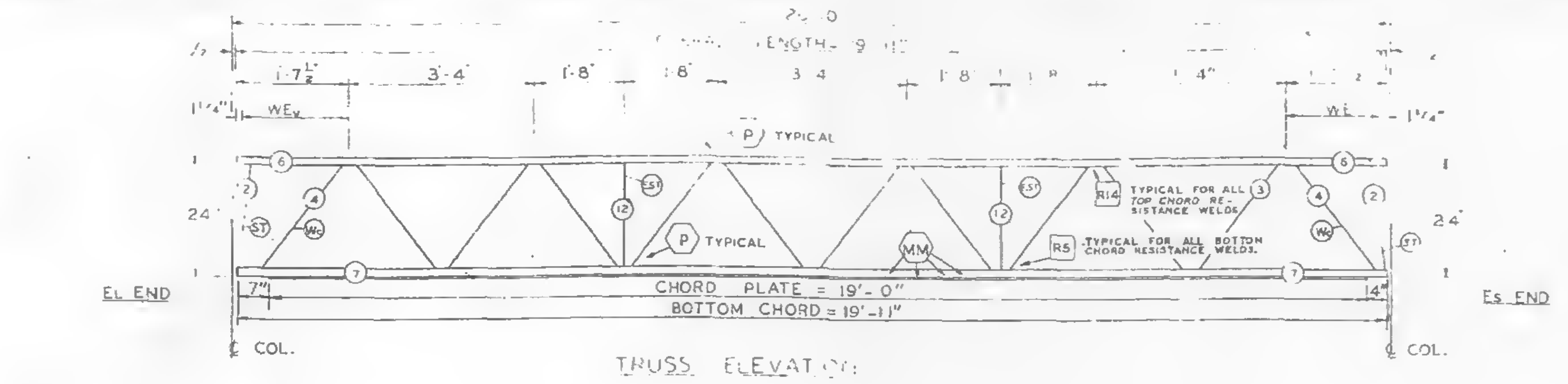
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				△1 INCLINED "STv" STRUT				END STIFFENER						WEB "Wcv" △1				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	1.14	1'-11 1/2"	—	—	—	—	—	—	4	A242	1	1.14	2'-5 1/2"

NO.	DATE	REVISION	BY
△1	6-26-68	AS NOTED	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

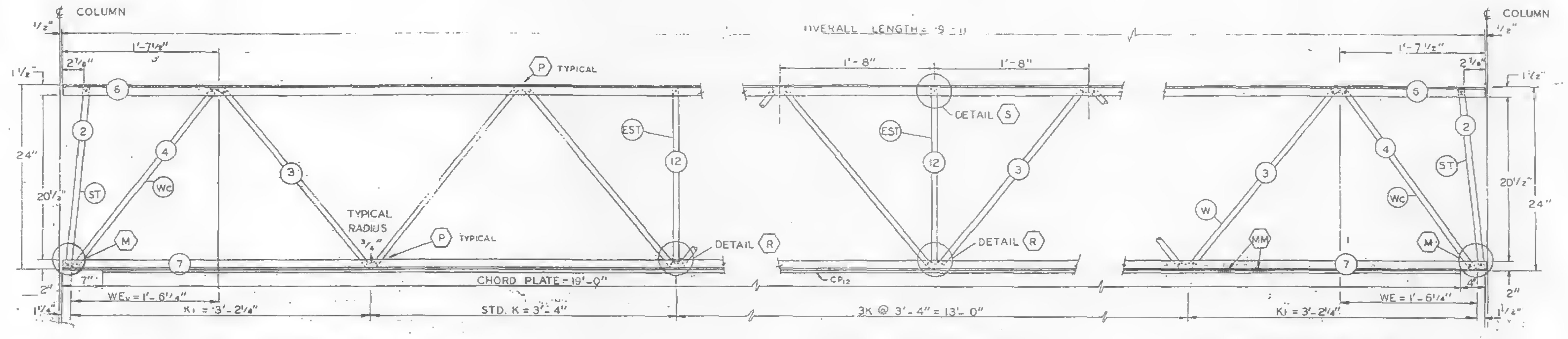
BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS · A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-5
PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A.
DATE 7/5/68
DRAWN BY
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY T.M.CHURA
DATE MAY 24 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A C WEBER
FABRICATION CONT. NO WTC 221
SHEET NO ST210



TRUSS ELEVATION

[illegible] ATION REQUIREMENTS	[illegible]	
CAMBER AT MIDSPAN		
DESIGN [illegible]	24"	
PANEL "K"	3'4"	
PANEL "K1"	3'-2¼"	
WEB DEPTH	[illegible]	
OVERALL LENGTH	9'[illegible]	



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (x)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST29D, ST281, AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., $\boxed{RS}$.
CHORD PLATE DETAILS SHOWN ON SHEET ST281.

REF. DWG. 7-AB2-1 4-1-68
7-AB2-5 4-15-68
7-AB4-15.1 1-3-68
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-16 & 18 5-17-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	30'-6½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½"x½"	19'-0"

Es	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

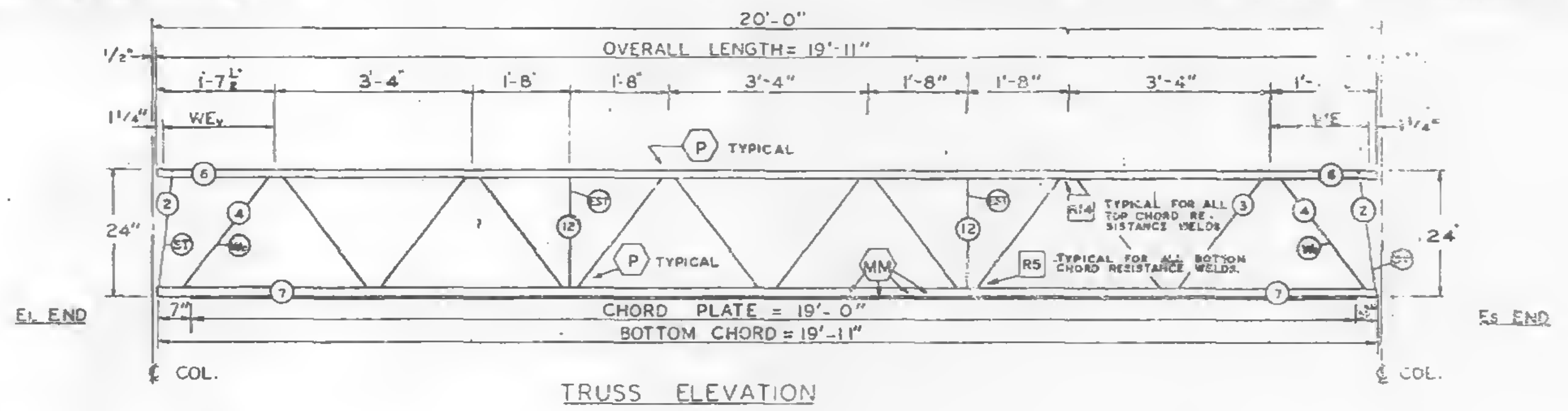
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

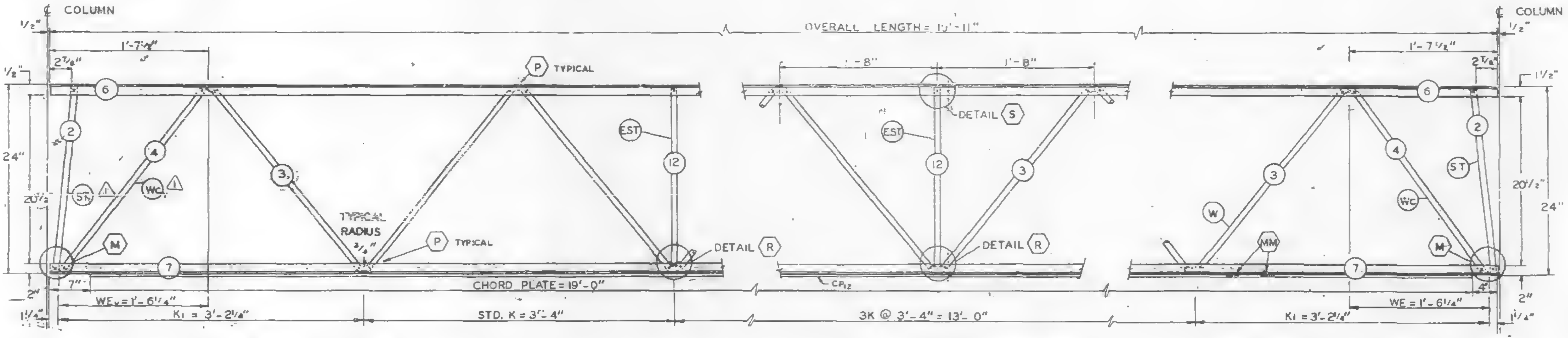
BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5
PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A DATE 6/6/68
DRAWN BY: [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY [illegible] FOR FABRICATOR DATE
LACLEDE STEEL CO.
CHECKED BY T.M. CHURA DATE MAY 24, 1968
IN CHARGE PROD DEPT
DETAILED BY A C WEBER
FABRICATION CONT NO W.T.C. 221
SHEET BT210



TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	"0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2¼"	± 1/4"
WEB DEPTH	23½"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES ( )
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM; ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF. DWG.		
	7-A82-1	4-1-68
	7-A82-5	4-15-68
	7-A84-13.1	1-3-68
	7-A84-19, 28 & 41	1-3-68
	7-A84-38	4-1-68
	7-A84-16 & 18	5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K.	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24TID -1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½"x½"	19'-0"

△2

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TI0 -1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				△1 INCLINED "ST" STRUT				END STIFFENER						WEB "Wc" △1				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TI0 -1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5⅛"

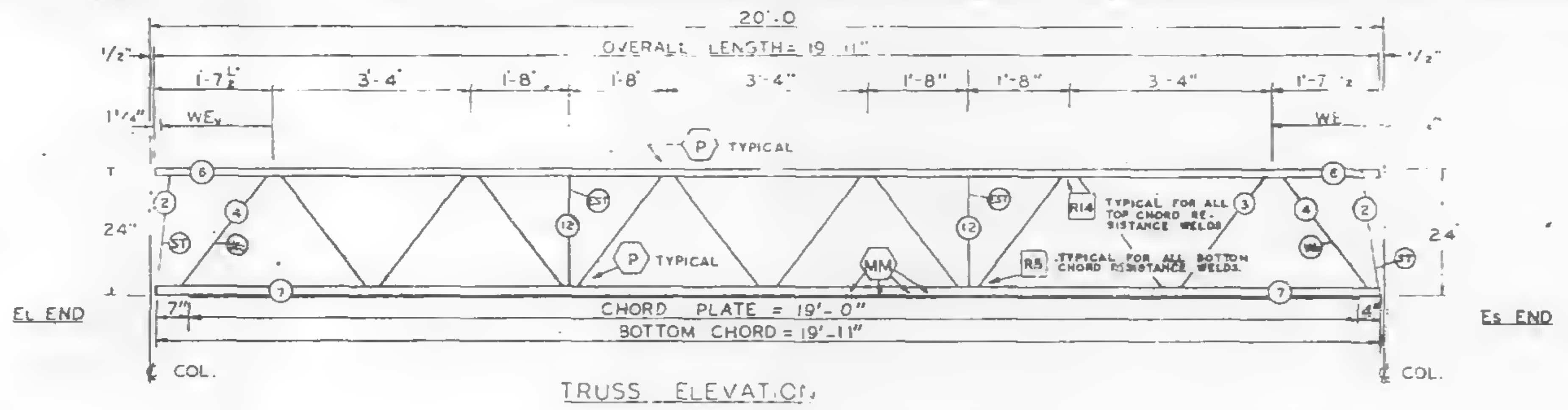
NO.	DATE	REVISION	BY
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

0010

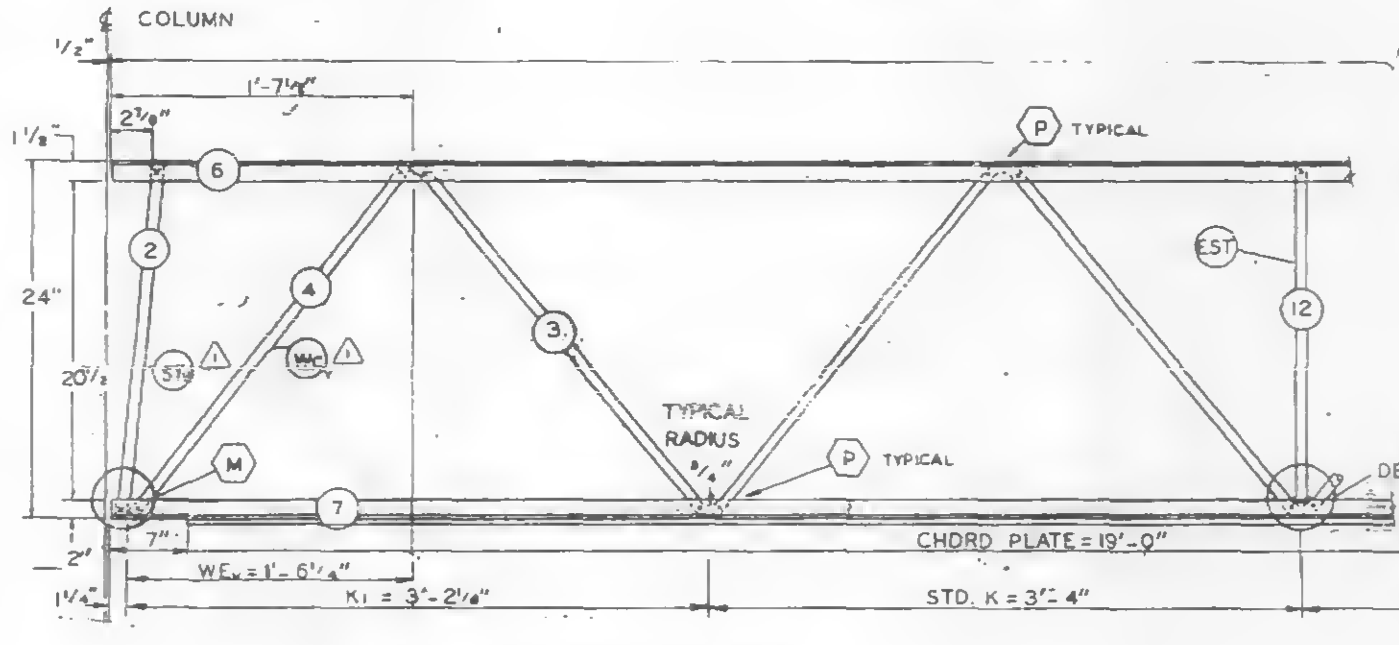
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TID x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

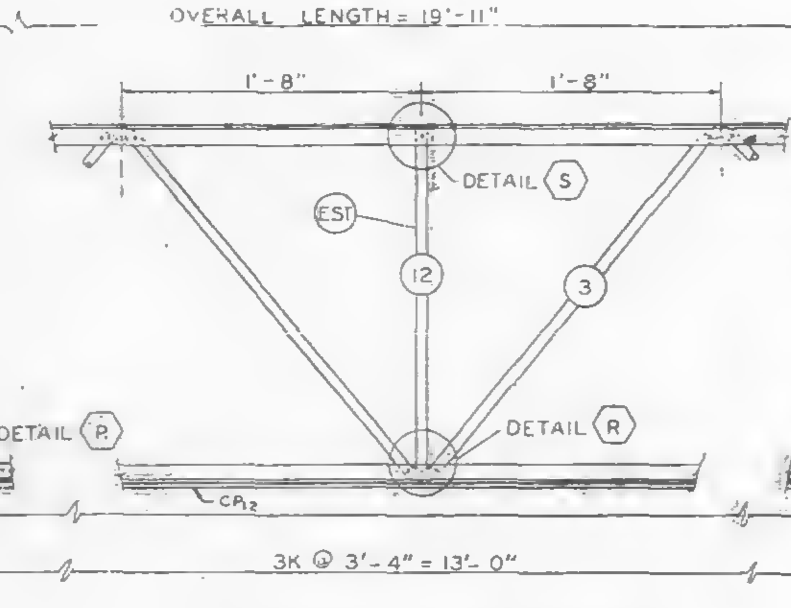
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-5 PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A DATE
DRAWN BY: [illegible]
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO
DETAILED BY A C WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO BT210



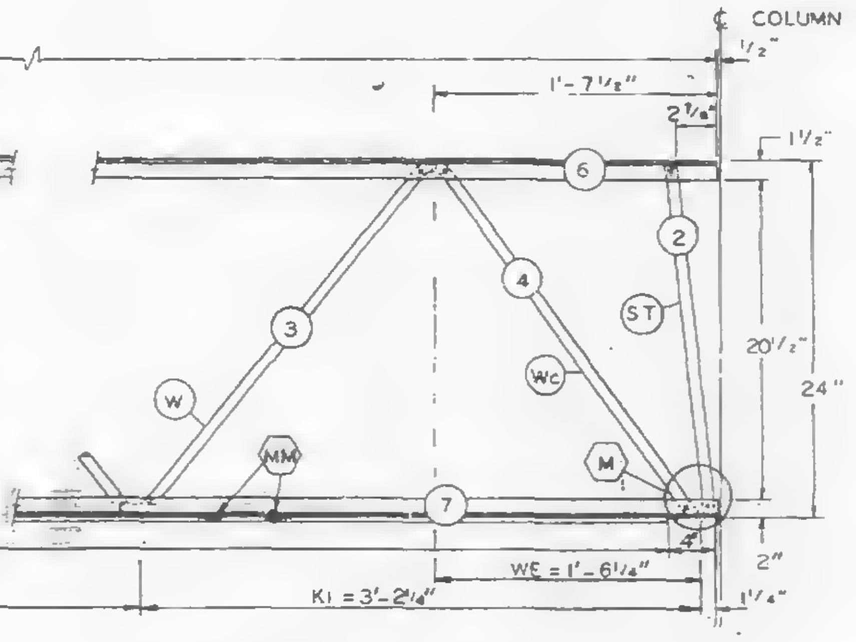
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/4"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K₁"	3'-2 1/4"	± 1/4"
WEB DEPTH	23 1/4"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (HHH)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 ⚠1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie.. ⟨A⟩
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 ⚠1

REF. DWG.

7-A82-1	4-1-68
7-A82-5	4-15-68
7-A84-15.1	1-3-68
7-A84-19, 28 & 41	1-3-68
7-A84-38	4-1-68
7-A84-16 & 18	5-6-68 ⚠1

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10B-1911	6	A242	2" x 1 1/2" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	25'-7 1/2"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10 7/8"	2			—	—	CP₁₂	A36	6 1/2" x 1/2"	19'-0"

⚠2

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10B-1911	1'-6 1/4"	2	A242	1.14	1'-11 3/4"	4	A242	1	1.14	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE₁	DIAGONAL "T" STRUT				INCLINED "ST₁" STRUT ⚠1				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wc₁" ⚠1				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10B-1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	1.14	1'-11 1/4"	—	—	—	—	—	—	4	A242	1	1.14	2'-5 1/2"

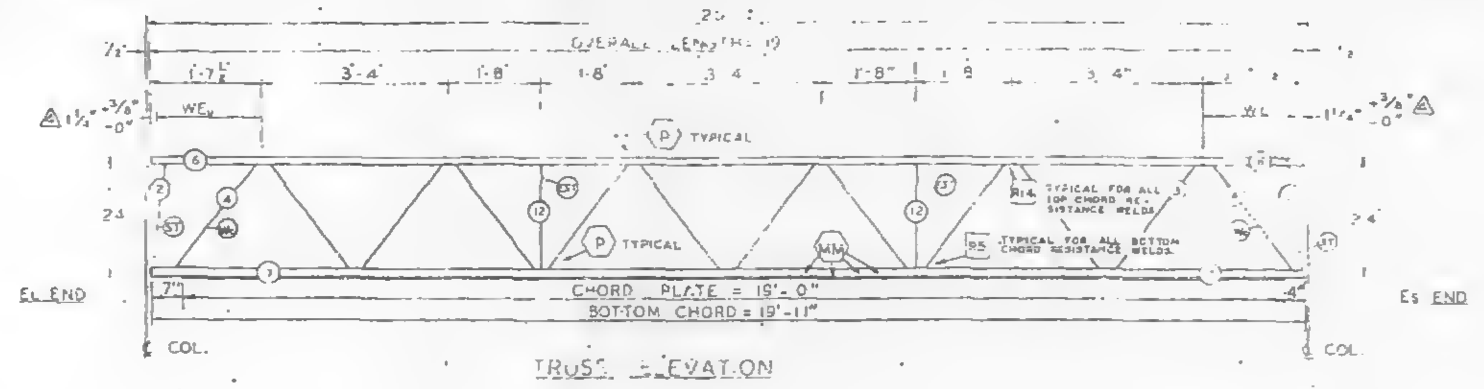
NO.	DATE	REVISION	BY
⚠2	7-3-68	MAIN WEB	T.M.C.
⚠1	6-26-68	AS NOTED	T.M.C.

VOID

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

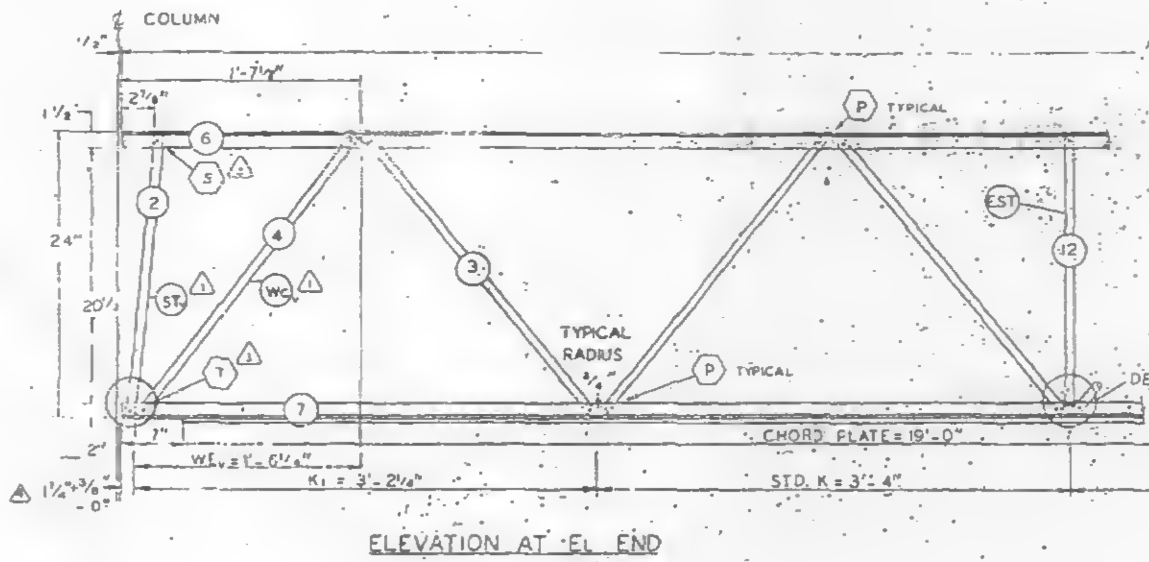
BRIDGING TRUSS 24T10B x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-5
PLATE
APPROVED FOR FABRICATION BY ______ FOR P.D.N.Y.A. DATE
DRAWN BY L-R
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY T.N. CHURA
DATE MAY 24, 1968
IN CHARGE PROD. DEV.
DETAILED BY A C WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. BT2108

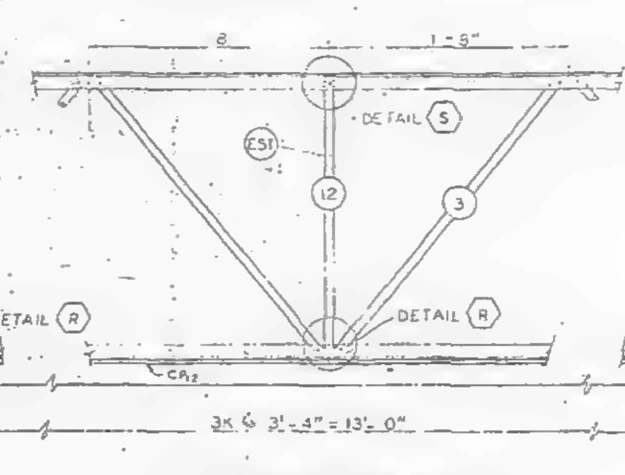


TRUSS ELEVATION

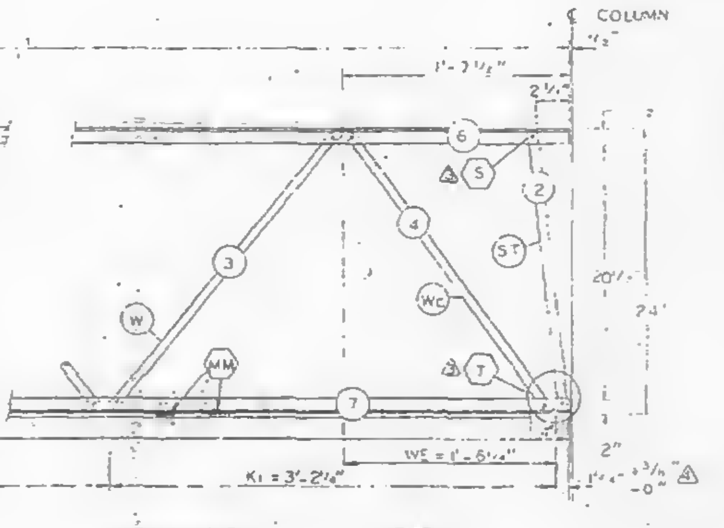
[illegible]	[illegible]
SPAN	9
	24
	3 4
LENGTH	9 11



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED [illegible]
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES [illegible]
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL [illegible]
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF. DWG. 7-AB2-1 4-1-68
7-AB2-5 [illegible]
7-AB4-15,1 [illegible]
7-AB4-19,20,& 41 [illegible]
7-AB4-38 [illegible]
7-AB4-18 & 18 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF [illegible]	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2"×1½"×.31"	19'-11"	7	A36	3"×2"×.33"	19'-11"	3	A242	1.14	25'-7½" △2	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10¼"	2			—	—	CR_2	A36	6½"×½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

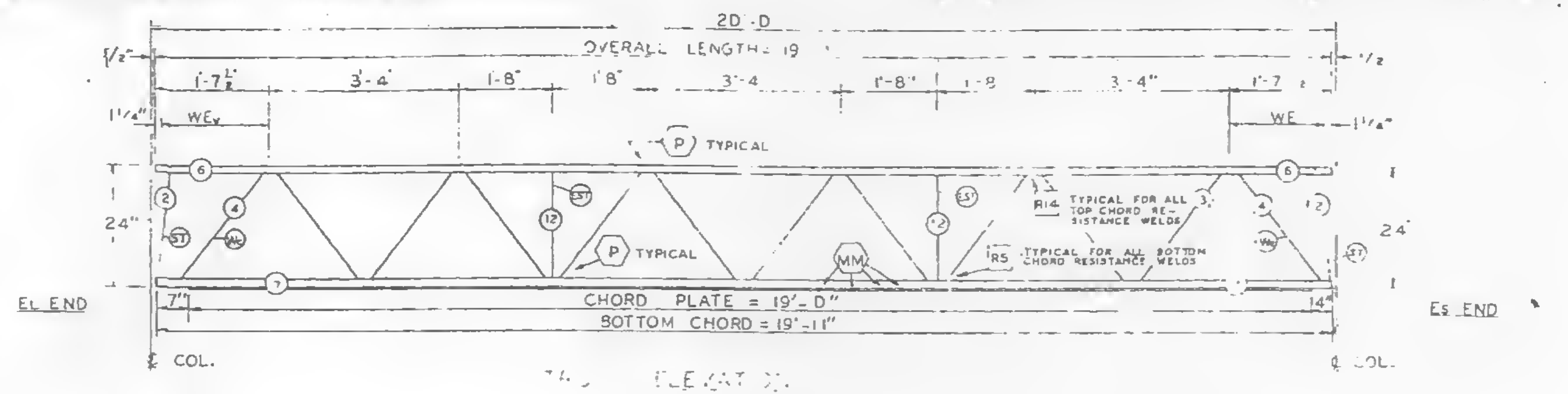
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_V	DIAGONAL "T" STRUT				INCLINED "ST_V" STRUT △1				END STIFFENER						WEB "WC_V" △1				
															MK. V5			MK. V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T10A-1911	—	—	—	—	1'-6¾"	—	—	—	—	2	A242	1.14	1'-11½"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
△4	9-5-68	END DIST ②	T.M.C.
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-25-68	AS NOTED	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

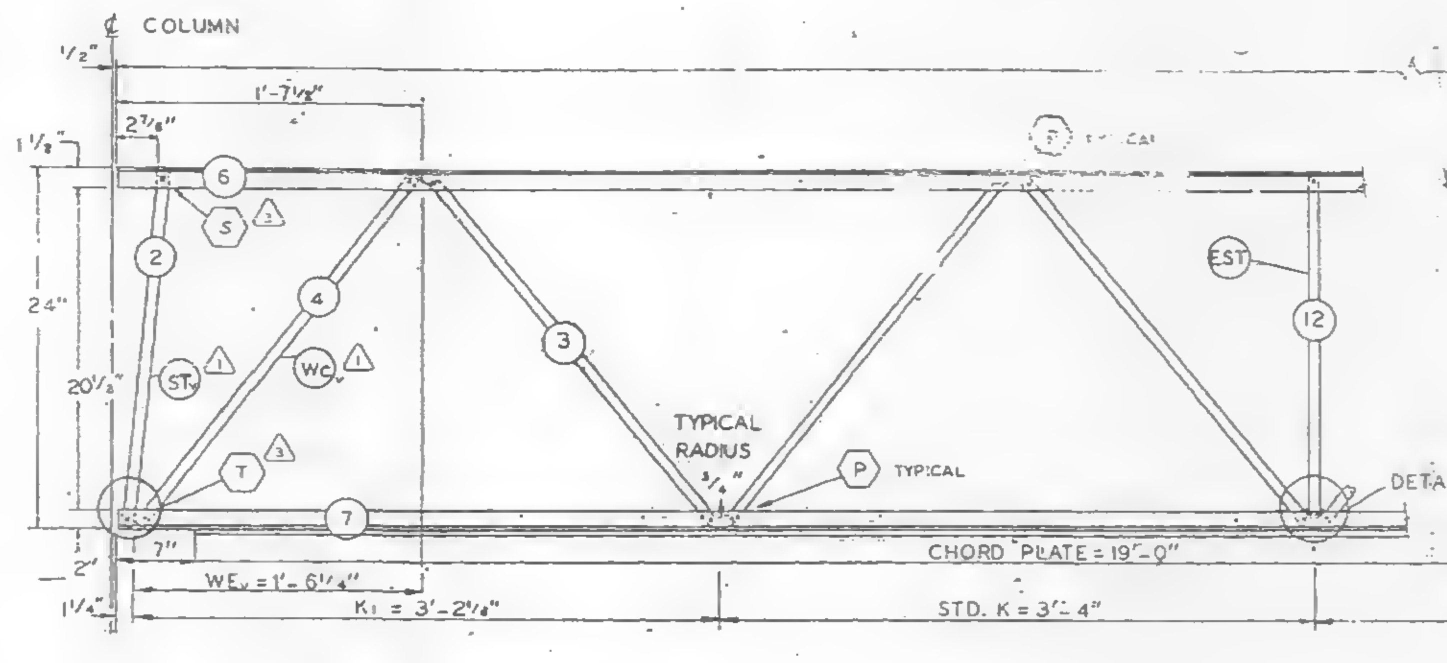
BRIDGING TRUSS 24T10A × 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5
APPROVED [illegible] DATE 9/10/68
DRAWN BY [illegible] DATE MAY 24, 1968
CHECKED BY T. MISHUHA DATE MAY 24, 1968
[illegible] 221
BT210A

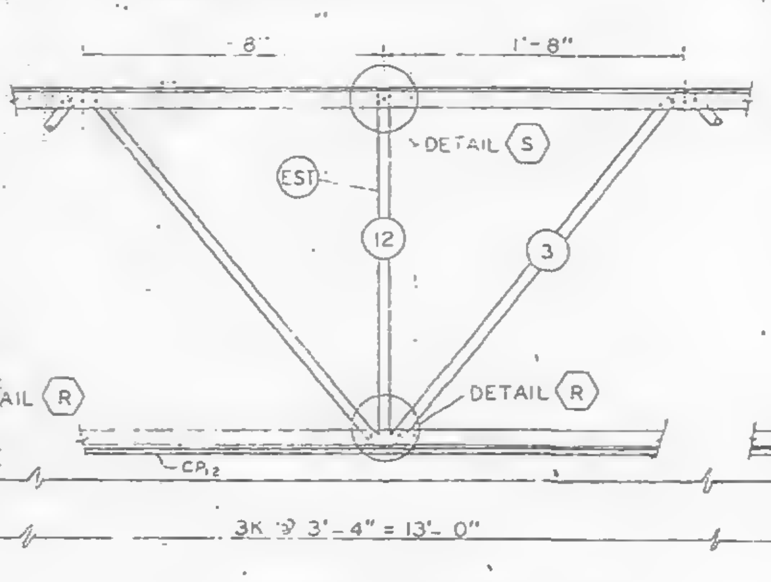


[illegible] ELEVATION

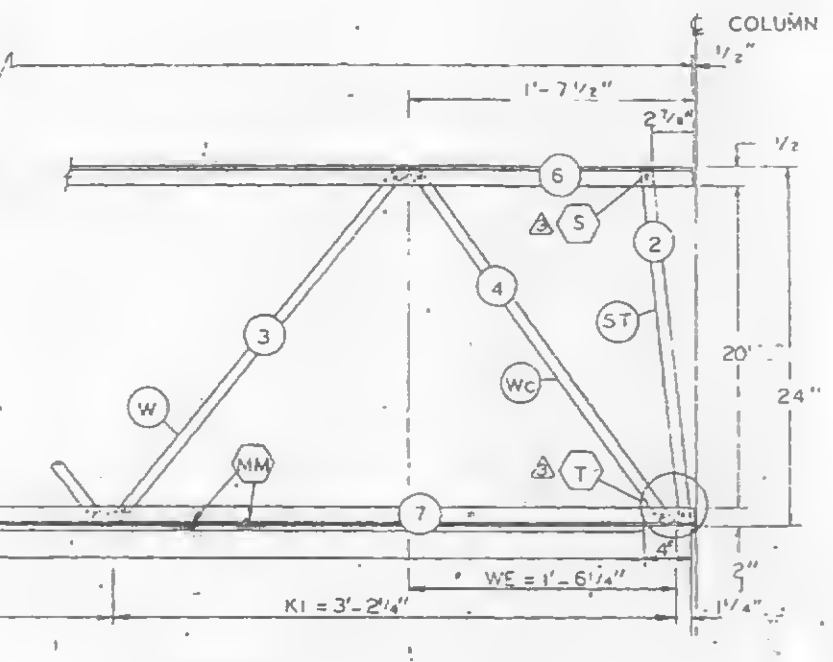
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL K	3'-4"	± 1/4"
PANEL K₁	3'-2¼"	± 1/4"
WEB DEPTH	23	± [illegible]
OVERALL LENGTH	19'-11"	± [illegible]



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (X)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 AND ST291. ⚠1
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., A
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST.282 ⚠1

REF. DWG.	
7-AB2-1	4-1-68
7-AB2-5	4-15-68
7-AB4-15.1	1-3-68
7-AB4-19, 28 & 41	1-3-68
7-AB4-38	4-1-68
7-AB4-16 & 18	5-6-68 ⚠1

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
2[illegible]-1911	6	A242	2"x 1½"x .31"	19'-11"	7	A36	3"x 2"x .33"	19'-11"	3	A242	1.14	25'-7½" ⚠2	5K ± 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP₂	A36	6½"x ½"	19'-0"

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

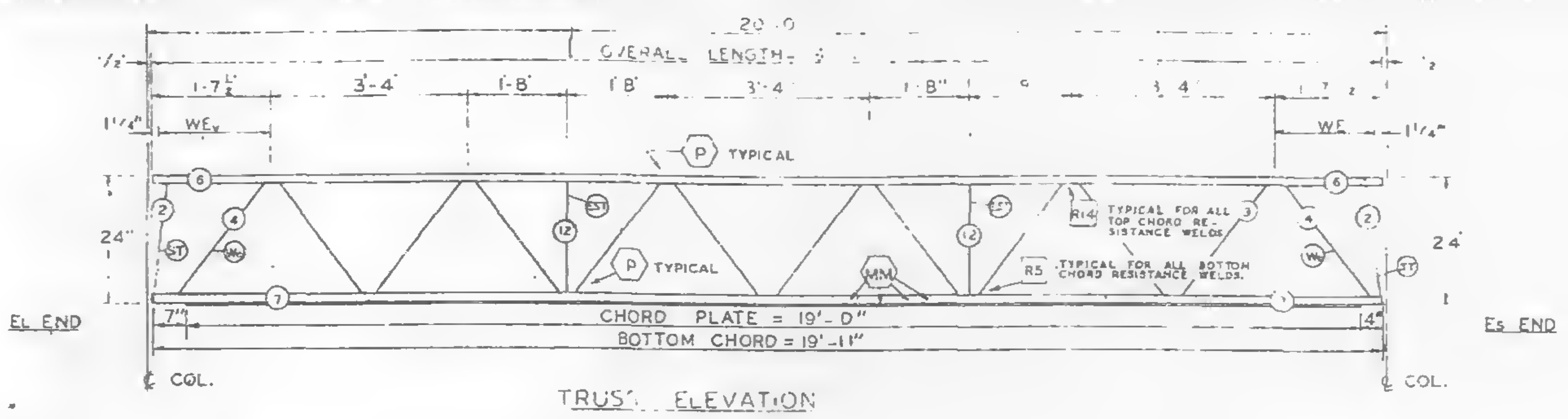
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE₁	DIAGONAL "T" STRUT				INCLINED "ST₁" STRUT ⚠1				END STIFFENER						WEB "WC₁" ⚠1				
															MK VS			MK VS							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11½"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
⚠3	7-8-68	AS NOTED	T.M.C.
⚠2	7-3-68	MAIN WEB	T.M.C.
⚠1	6-26-68	AS NOTED	T.M.C.

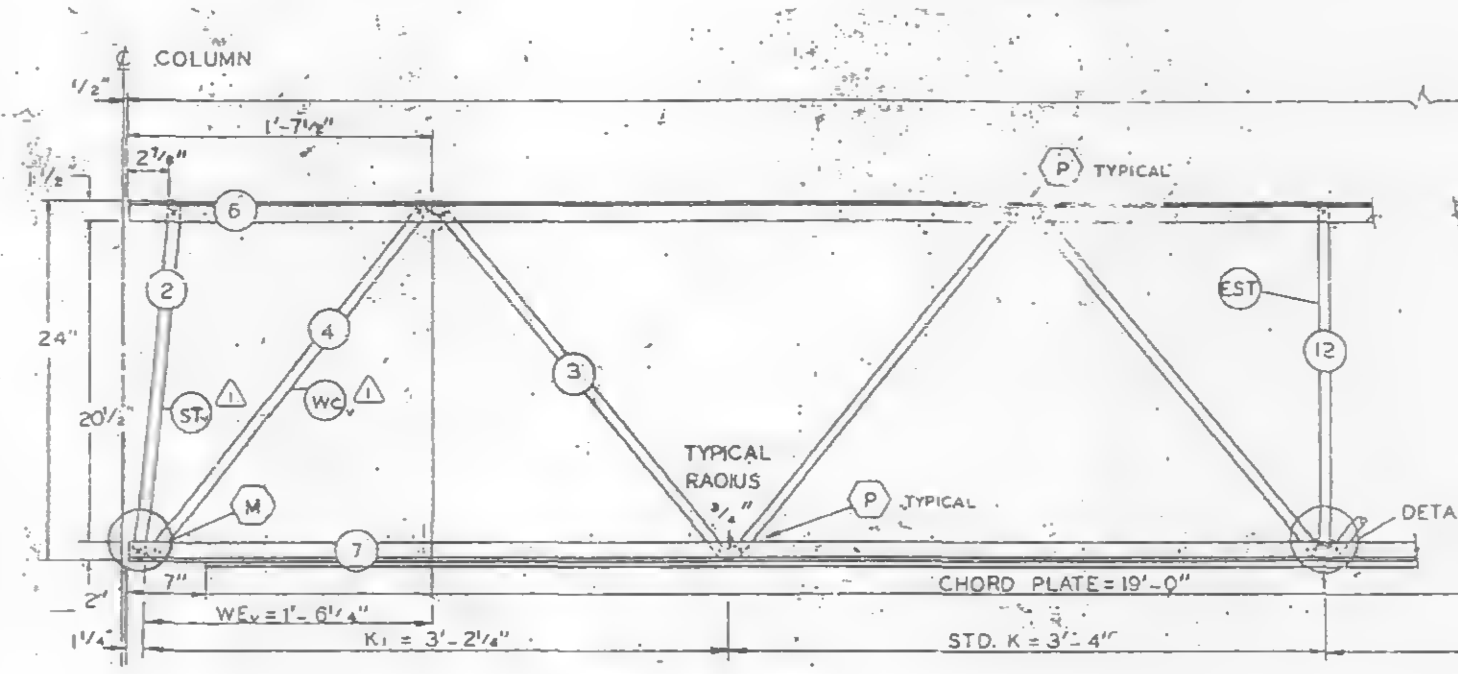
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

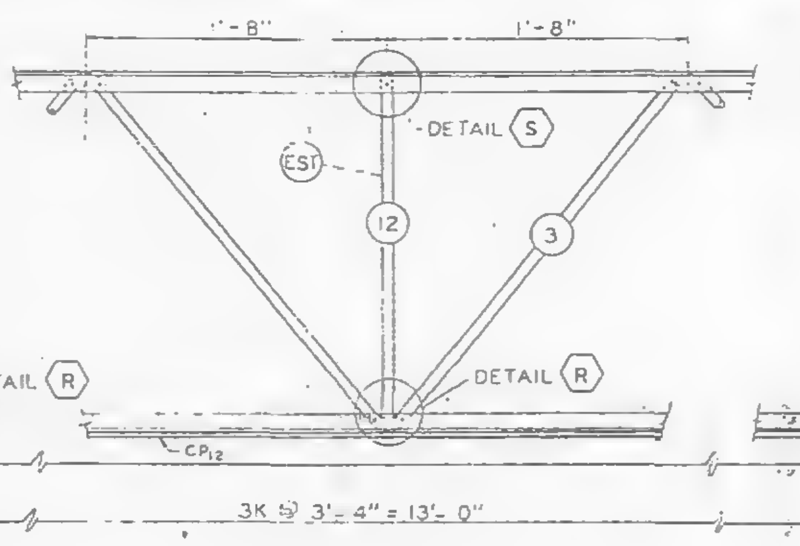
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-5
PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A. DATE 7/9/68
DRAWN BY [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED B T.M.CHURA DATE MAY 24, 1968
IN CHARGE PROD. [illegible]
DETAILED BY [illegible] WEBER
FABRICATION CONT NO W.T.C. 221
SHEET BT210A



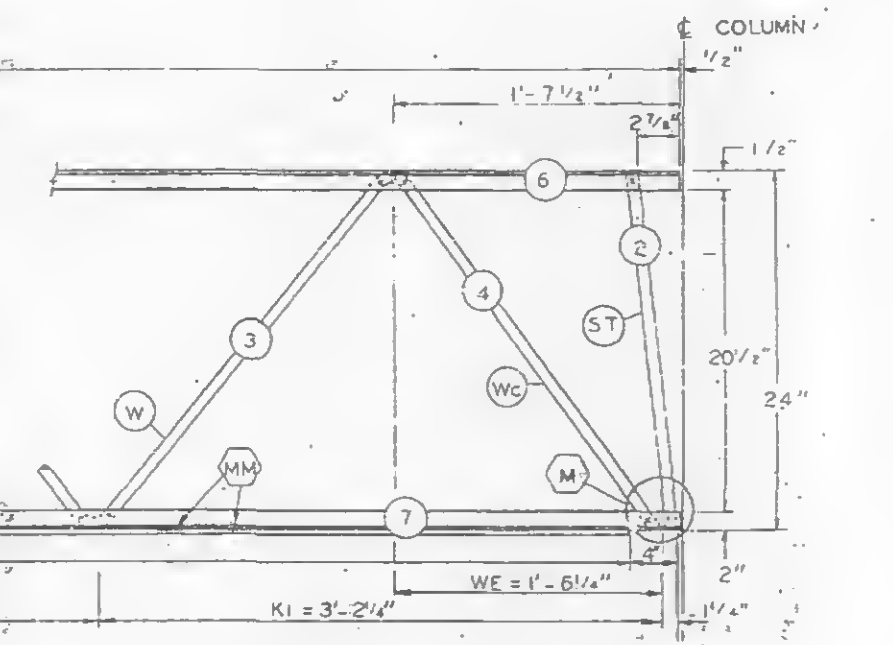
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2¼"	± ¼"
WEB DEPTH	23½"	± ¼"
OVERALL LENGTH	19'-11"	± ⅛"

ALL PANEL POINTS RESISTANCE WELDED (x)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (////)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF. DWG.

7-AB2-1	4-1-68
7-AB2-5	4-15-68
7-AB4-15.1	1-3-68
7-AB4-19, 28 & 41	1-3-68
7-AB4-38	4-1-68
7-AB4-16 & 18	5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
REO NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	30'-6½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½"x½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_V	DIAGONAL "T" STRUT				INCLINED "ST" STRUT △1				END STIFFENER						WEB "Wc" △1				
															MK VS			MK VS							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	——	——	1'-6¼"	—	—	—	——	2	A242	1.14	1'-11½"	—	—	——	—	—	—	4	A242	1	1.14	2'-5½"

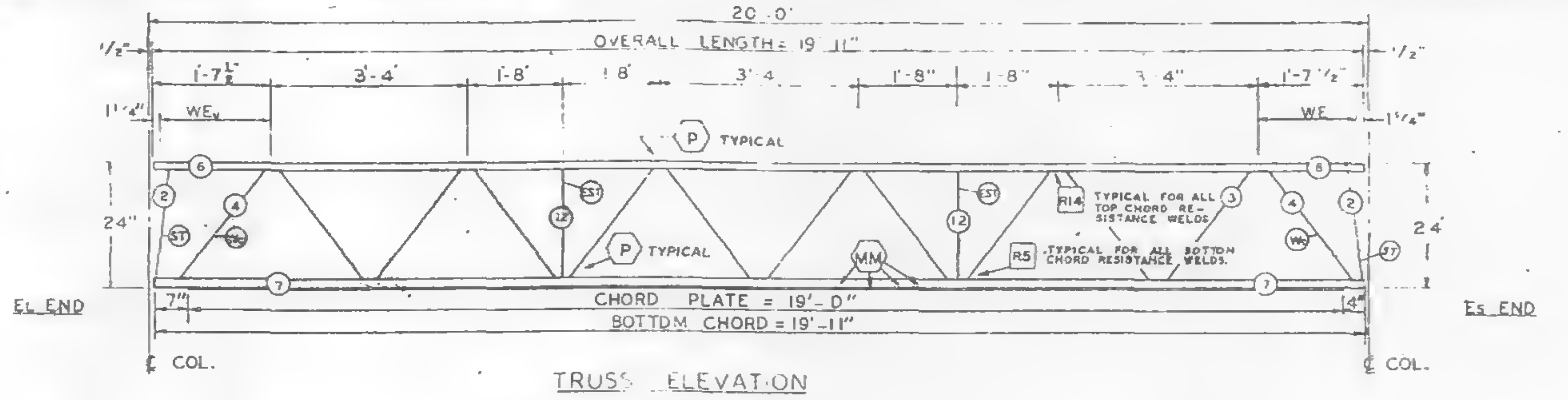
NO.	DATE	REVISION	BY
△1	6-26-68	AS NOTED	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

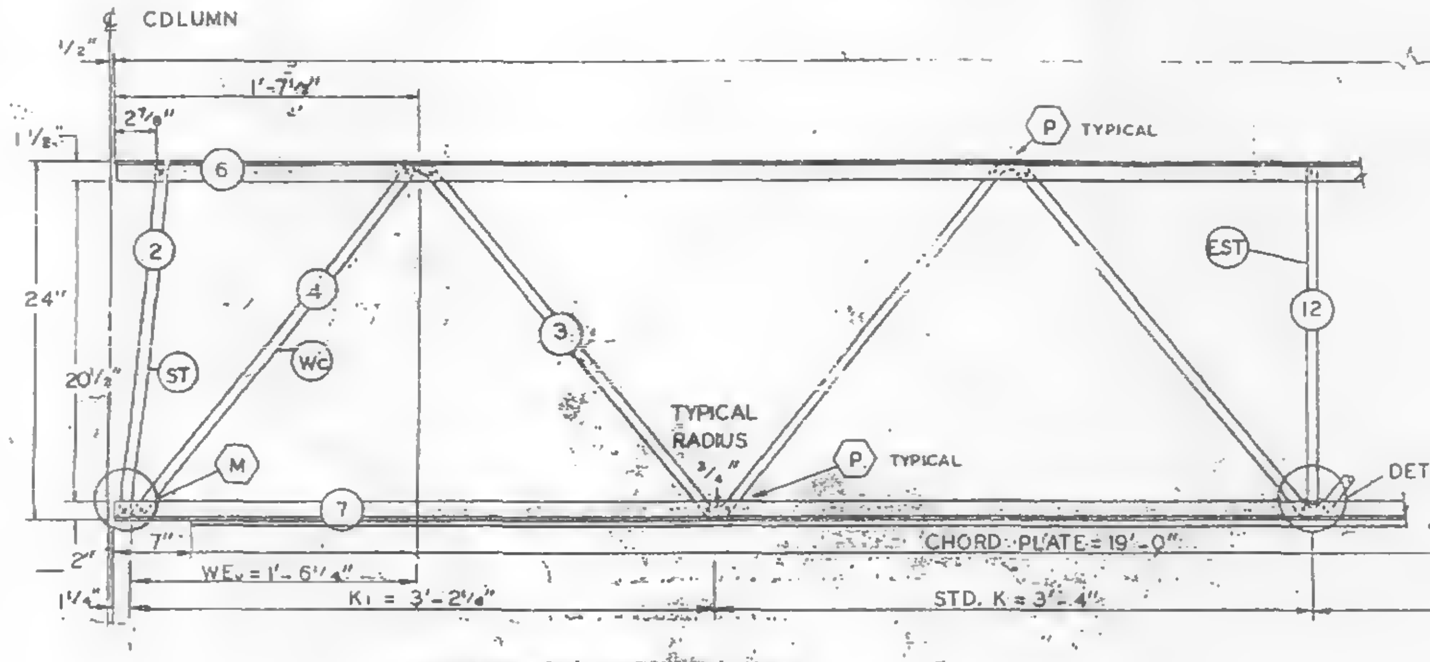
BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS · A-B

FABRICATION BY LACLEDE STEEL COMPANY

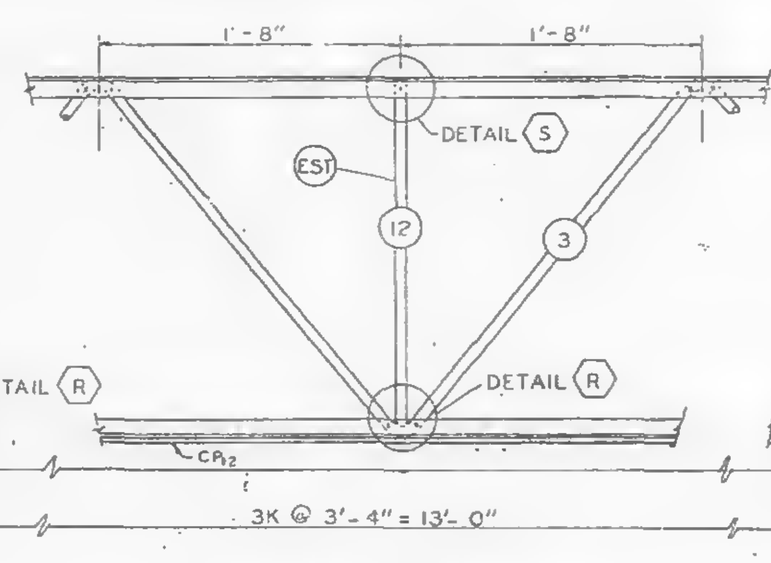
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-5	PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A	DATE 7/5/68	DRAWN BY [illegible] DATE MAY 24 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE MAY 24 1968	IN CHARGE PROD
DETAILED BY A.C. WEBER		FABRICATION CONT NO W.T. 221	SHEET BT210A



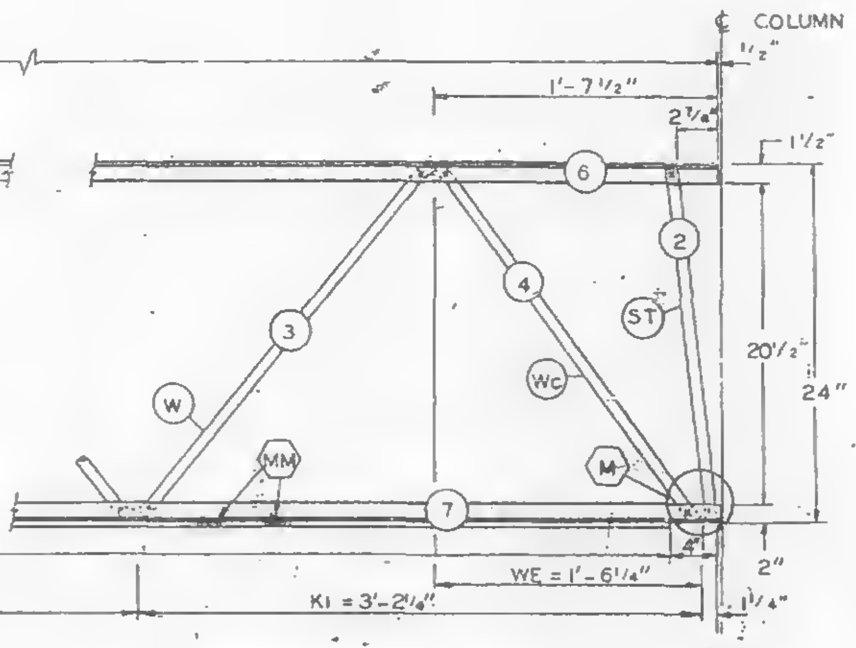
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2¼"	± 1/8"
WEB DEPTH	23½"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (////)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST281, AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST281.

TISHMAN
[illegible]
CONSTRUCTION DEPT.

REF. DWG.
7-AB2-1 4-1-68
7-AB2-5 4-15-68
7-AB4-15.1 1-3-68
7-AB4-15,28 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-16 & 18 5-17-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2"x 1½"x .31"	19'-[illegible]	7	A36	3"x 2"x .33"	19'-11"	3	A242	1.14	30-6½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP½	A36	6½"x¼"	19'-0"

Es	TRUSS DESIGNATION	WE	INCLINED 'ST' STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

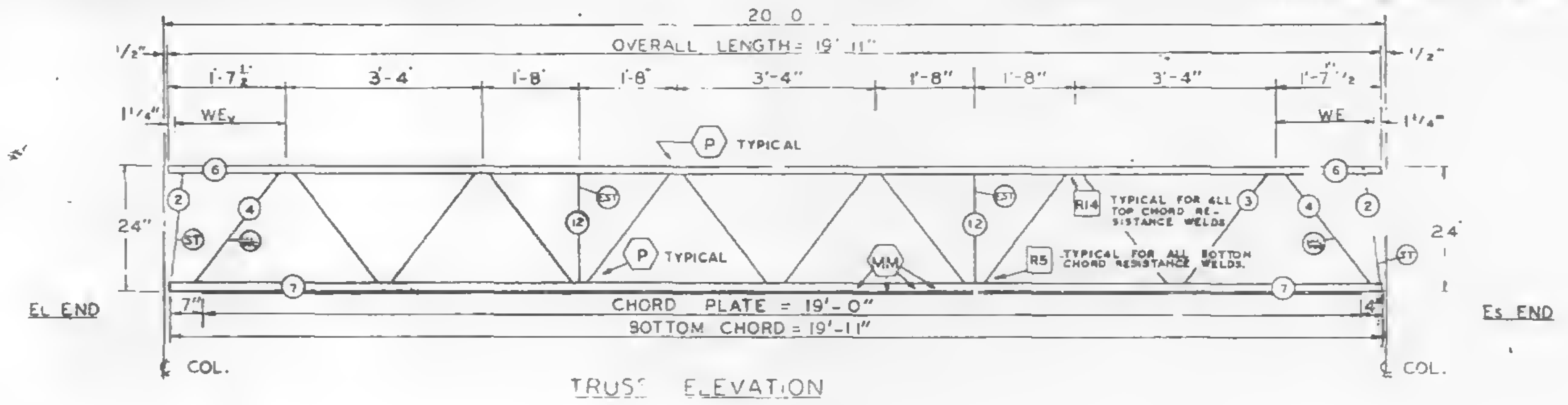
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEr	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	——	——	1'-6¼"	—	—	—	——	2	A242	1.14	1'-11¾"	—	—	——	—	—	——	4	A242	1	1.14	2'-5⅛"

NO.	DATE	REVISION	BY

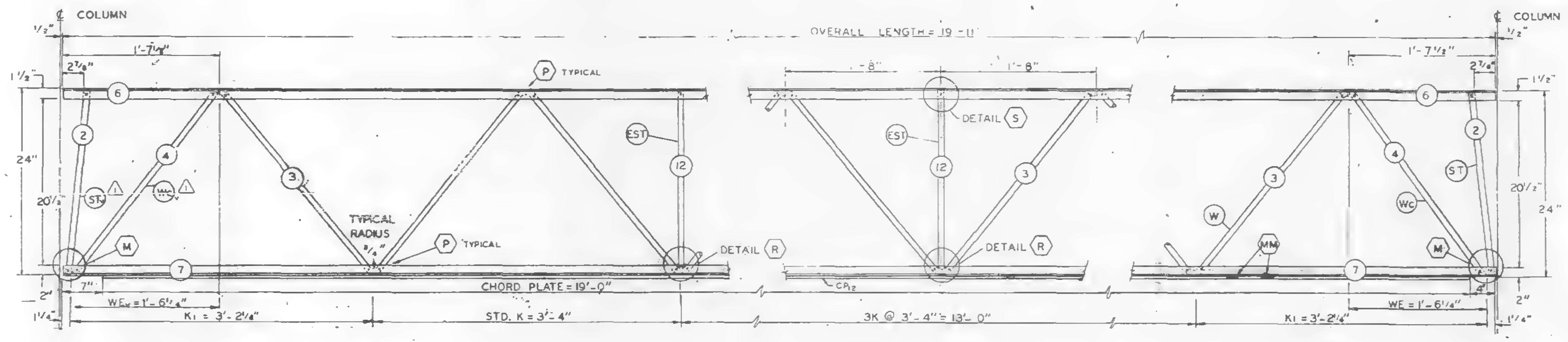
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5
PLATE
APPROVED FOR FABRICATION BY T. [illegible] FOR P.O.N.Y.A. DATE 6/6/68
DRAWN BY A [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY [illegible] FOR FABRICATOR DATE [illegible]
CHECKED BY T.M. CHURA DATE MAY 24, 1968
IN CHARGE PROD
DETAILED BY A C WEBER
FABRICATION CONT NO W.T. 1-221
SHEET BT210A



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL K	3'-4"	± ¼"
PANEL K1	3'-2¼"	± ¼"
WEB DEPTH	23½"	± ¼"
OVERALL LENGTH	19'-11"	± ⅛"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie.. ⬡A
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF. DWG.
7-A82-1 4-1-68
7-A82-5 4-15-68
7-A84-15.1 1-3-68
7-A84-19,20 & 41 1-3-68
7-A84-38 4-1-68
7-A84-18 & 18 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½" △2	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CR	A36	6½"x¼"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED 'ST' STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE$_v$	DIAGONAL "T" STRUT				INCLINED "ST$_v$" STRUT △1				END STIFFENER						WEB "Wc" △1				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11½"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

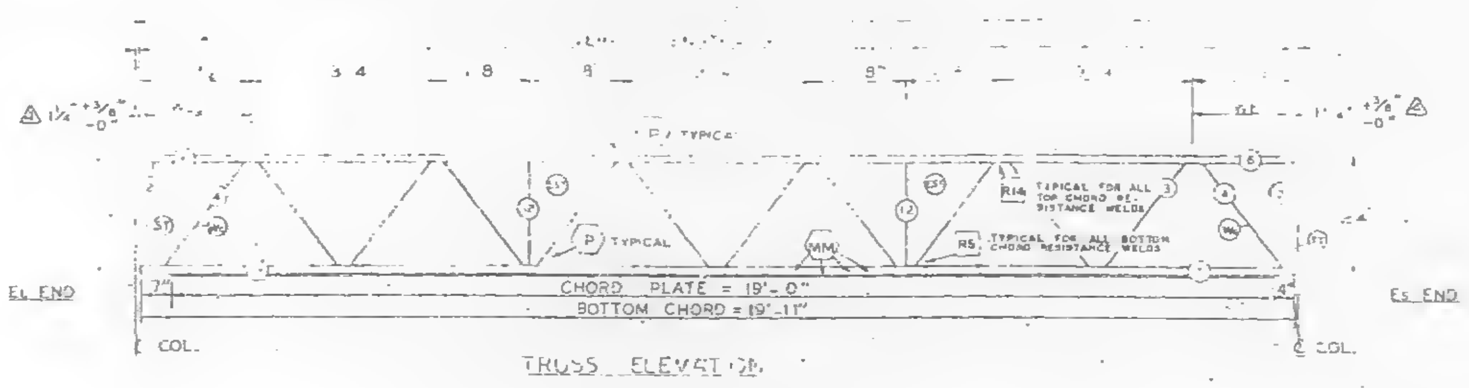
NO.	DATE	REVISION	BY
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

Void

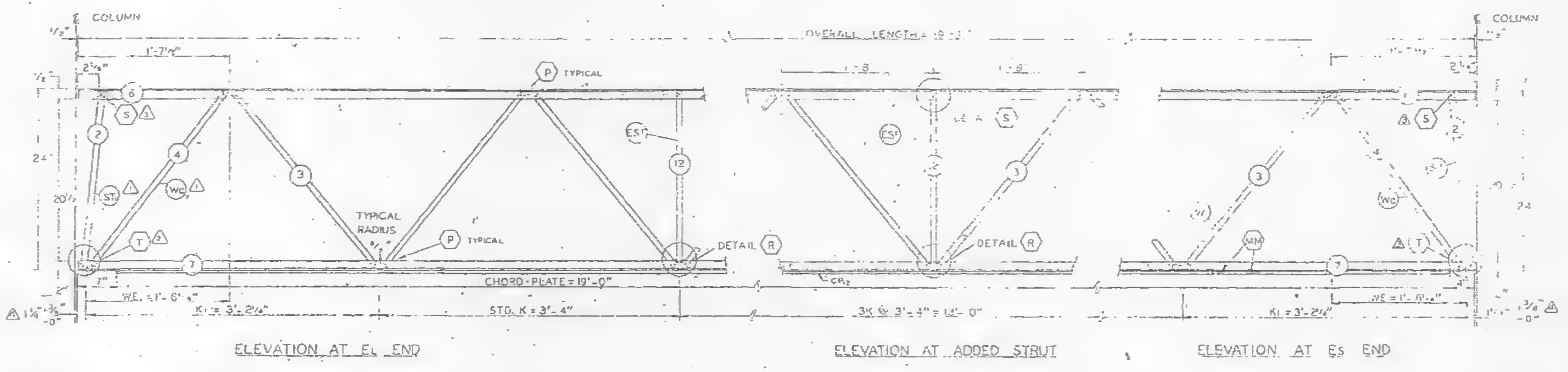
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO 7-A82-5
PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A. DATE ______
DRAWN BY: [illegible]
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE ______
CHECKED BY T.M.CHURA
DATE MAY 24, 1968
IN CHARGE PROD. [illegible]
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET BT210A


EL END
Es END
CHORD PLATE = 19'-0"
BOTTOM CHORD = 19'-11"
COL.
COL.
TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS
TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS
P TYPICAL

TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

[illegible] PANEL POINTS RESISTANCE WELDED [illegible]
[illegible] WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES [illegible]
[illegible] WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL. [illegible]
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF. DWG. 7-AB2-1 ______ 4-1-68
7-AB2-5 ______ 4-12-68
7-AB4-12 ______ 1-3-68
7-AB4-19, 28 & 41 ______ 1-4-68
7-AB4-38 ______ 4-1-68
7-AB4-16 & 18 ______ 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO. 1000

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL TEST STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	[illegible]	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T108-1911	6	A242	2" × 1½" × .312	19'-11"	7	A36	3" × 2" × .33"	19'-11"	3	A242	1.14	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP2	A36	6½" × ½"	19'-0"

△2

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	[illegible]	1'-8¼"	2	A242	1.14	[illegible]	4	A242	1	1.14	2'-5½"

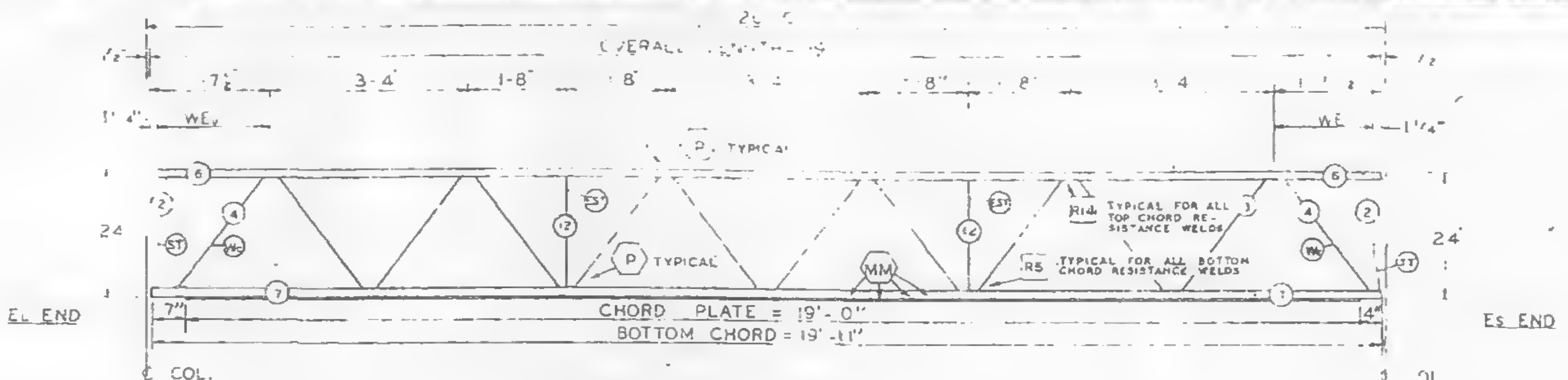
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE1	DIAGONAL "T" STRUT				INCLINED "ST1" STRUT △1				END STIFFENER						WEB "WC1" △1				
															MK. V5			MK. V6							
		MK.	TYPE STEEL	SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T108-1911				—	1'-6⅛"	—	—	—	—	2	A242	1.14	1'-11½"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
△4	9-5-68	END DIST. ②	T.M.C.
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

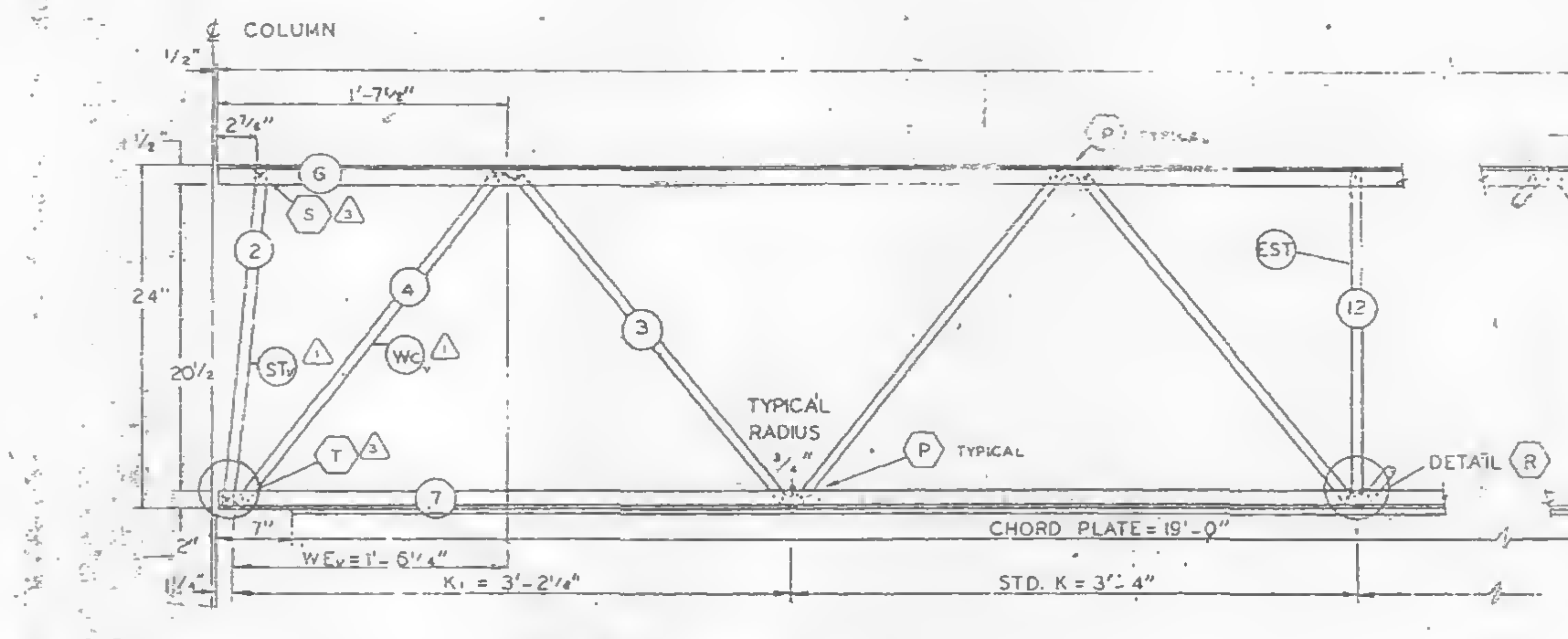
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T108 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

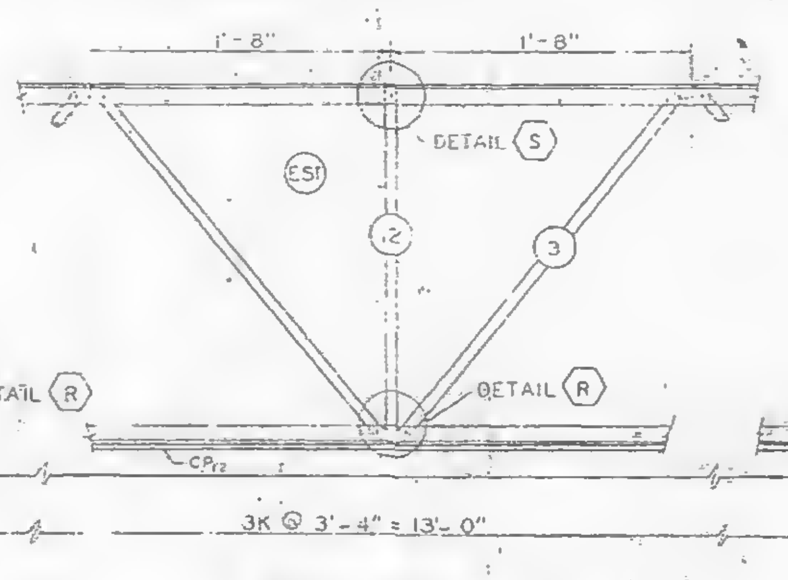
LACLEDE STEEL COMPANY
FABRICATED AT MADISON NO. 5
DESIGN DRAWING NO. 7-AB2-5
APPROVED FOR FABRICATION DATE 9/10/68
DRAWN BY [illegible] DATE MAY 24, 1968
CHECKED BY T.M. CHUBA DATE MAY 24, 1968
IN CHARGE PROD. DEV.
FABRICATION CONT. NO. [illegible] 221
SHEET NO. BT2108



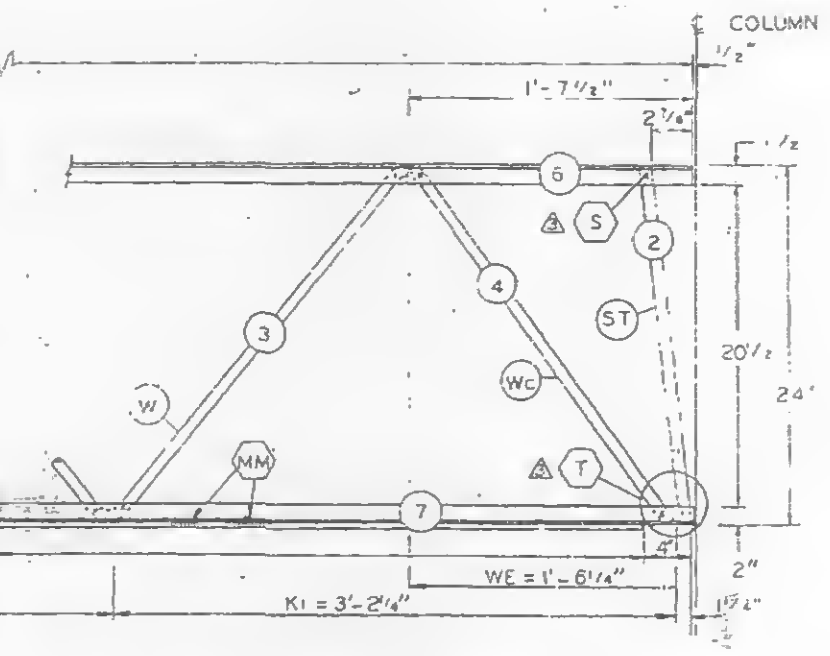
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

CAMBER AT MIDSPAN	0	± ⅛
DESIGN DEPTH	24	± ¼
PANEL K	3-4	± ¼
PANEL K₁	3-2¼	± ¼
WEB DEPTH	23⅝	± ⅛
OVERALL LENGTH	19-11	± ⅛

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e., ⬡A
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF DWG
7-AB2-1 4-1-68
7-AB2-5 4-15-68
7-AB4-15.1 1-3-68
7-AB4-15,28 & 41 [illegible]
7-AB4-38 4-1-68
7-AB4-15 & 18 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO 1000H

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
[illegible]	6	A242	2"x 1½"x .31"	19'-11"	7	A36	3"x 2"x .33"	19'-11"	3	A242	1.14	25'-7½" △2	5K @ 3'-4" = 6'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP₁₂	A36	6½"x ½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T108 - 1911	1'-6¼"	2	A242	1.14	1'-11¼"	4	A242	1	1.14	2'-5½"

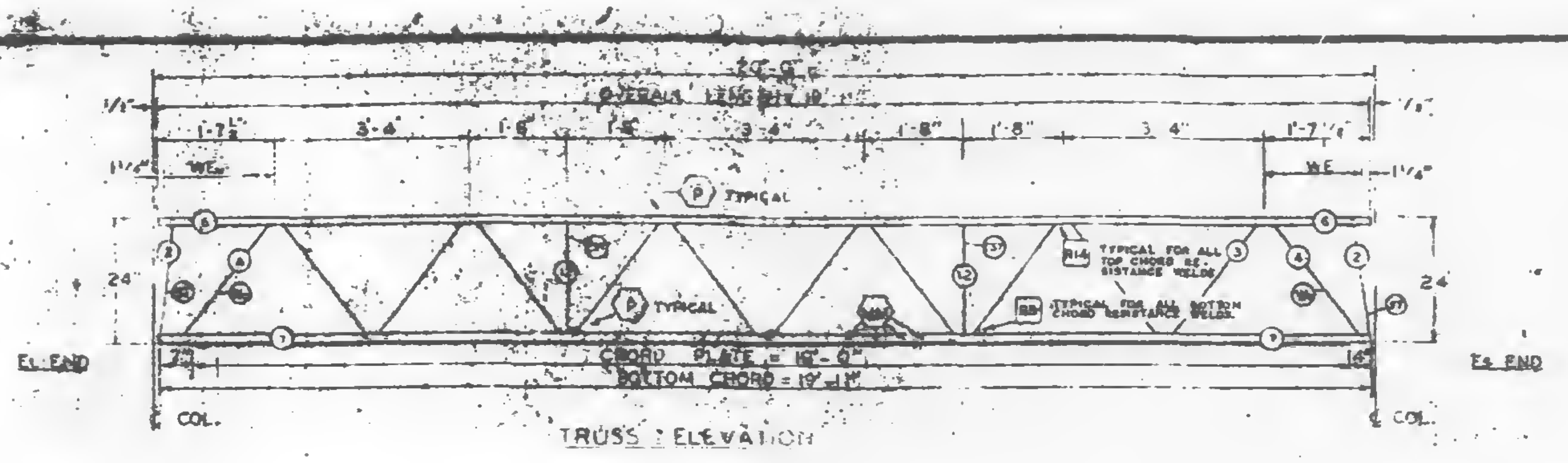
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE₁	DIAGONAL "T" STRUT				INCLINED "ST₁" STRUT △1				END STIFFENER								WEB "Wc₁" △1				
		MK	TYPE STEEL	SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK VF	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T108 - 1911	—	—	—	—	6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

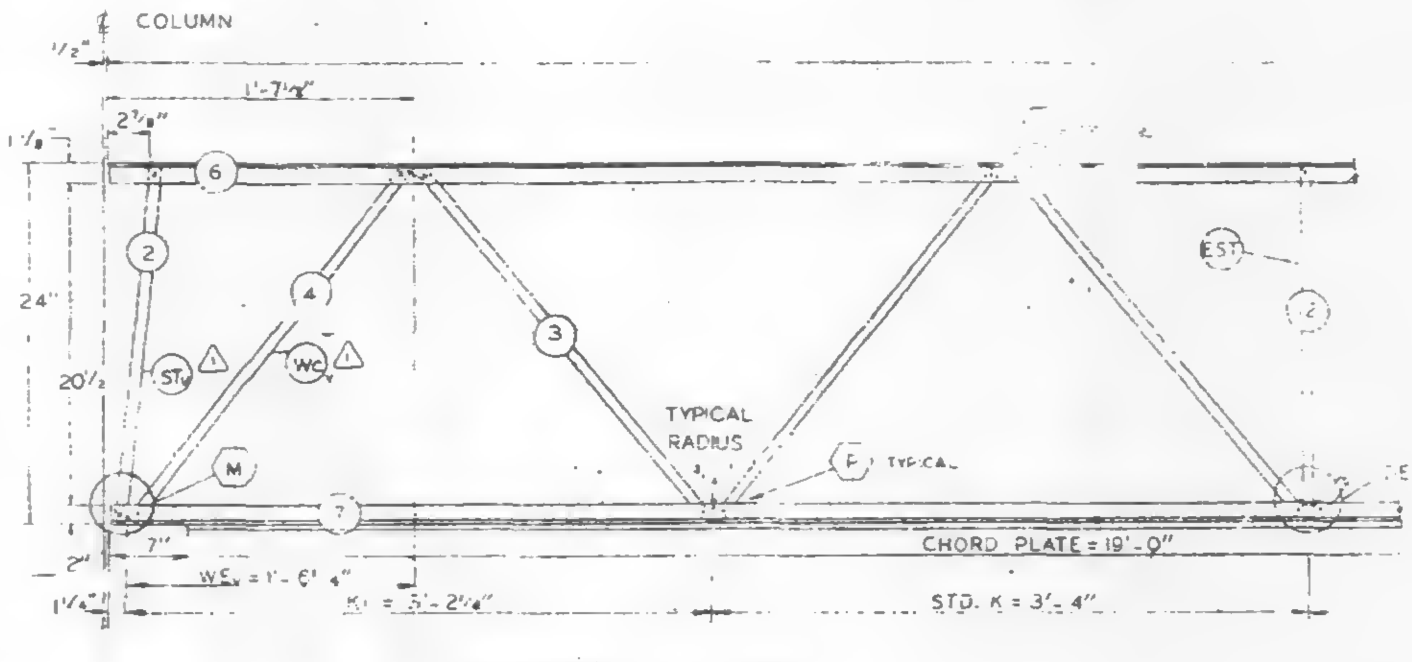
BRIDGING TRUSS 24T108 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A B

FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7 AB2-5
APPROVED FOR FABRICATION BY JW FOR P.N.Y.A. DATE 7/9/68
APPROVED FOR FABRICATION FOR FABRICATOR DATE
DRAWN BY [illegible] DATE MAY 24, 1968
CHECKED BY T.M.CHERA DATE MAY 24, 1968
DETAILED BY [illegible] WEBER
WT 22
SHEET ST2108

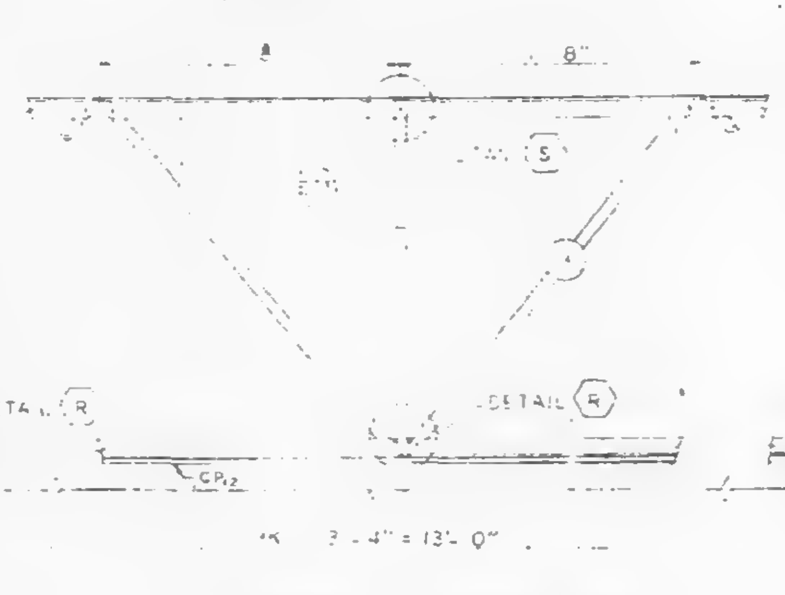


TRUSS ELEVATION

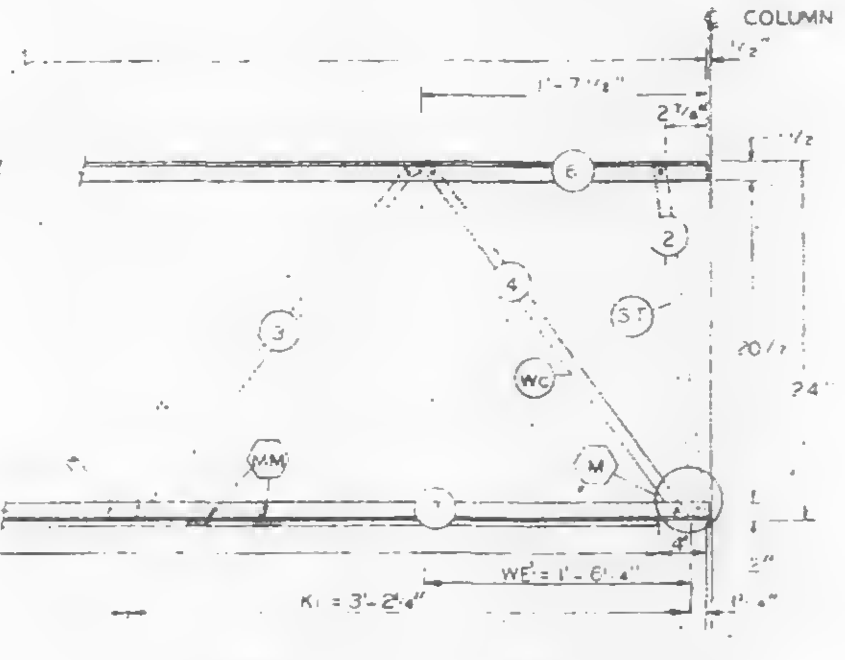
FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	±1/8
DESIGN DEPTH	24"	±1/8
PANEL "K"	3'-4"	±1/8
PANEL "K1"	3'-2 1/4"	±1/8
WEB DEPTH	23 1/2"	±1/8
OVERALL LENGTH	19'-11"	±1/8



ELEVATION AT E1 END



ELEVATION AT ADDED STRUT



ELEVATION AT E5 END

ALL PANEL POINTS RESISTANCE WELDED (X)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 ⚠
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie. R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 ⚠

REF. DWG [illegible]
48 & 46 & 48
6 68 ⚠

TRUSS DESIGNATION	TOP CHORD	BOTTOM CHORD	MAIN WEB	FILLER	CHORD PLATE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TYPE STEEL / SIZE / LENGTH

24" B

TRUSS DESIGNATION

24" B

⚠ 6·26·68 AS NOTED

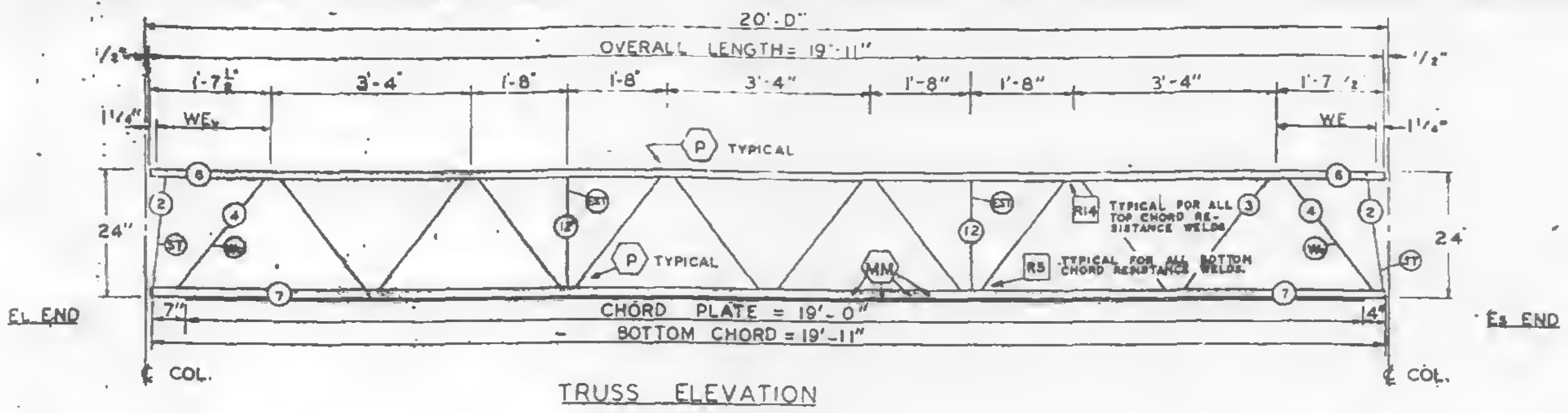
BRIDGIN [illegible] DETA
FOR
WORLD TRADE CENTER
FOR
PORT OF NEW YORK [illegible]

[illegible] 108

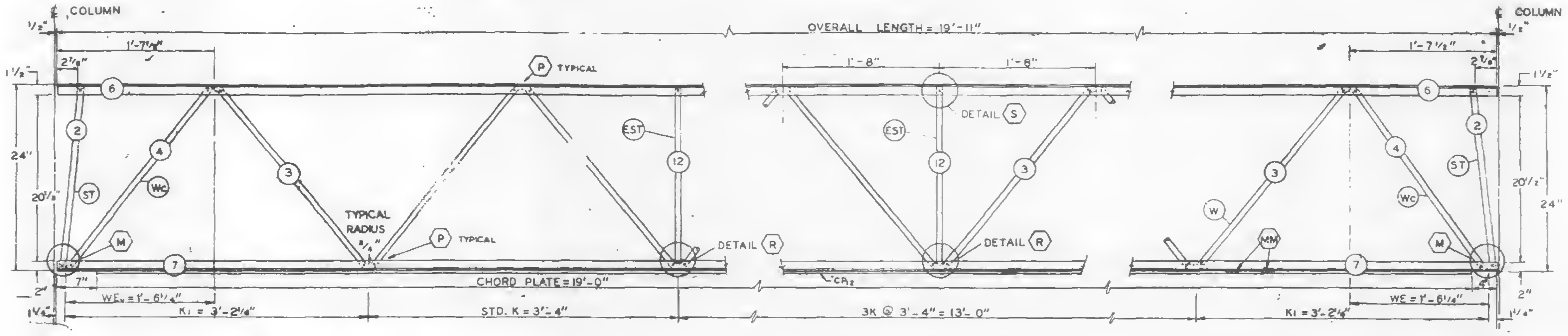
JW 7/5/68

T.M.C

B



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24"	± ⅛"
PANEL "K"	3'-4"	± ⅛"
PANEL "K1"	3'-2¼"	± ⅛"
WEB DEPTH	23½"	± ¼"
OVERALL LENGTH	19'-11"	± ⅛"

ALL PANEL POINTS RESISTANCE WELDED (x)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST281, AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie.,
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST281.

REF. DWG. 7-AB2-1 4-1-68
7-AB2-5 4-?-68
7-AB4-15.1 1-3-68
7-AB4-19,20 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-18 & 19 5-17-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK	TYPE STEEL	SIZE	LENGTH
24T108-1911	6	A242	2" x 1½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	30'-6½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP2	A36	6½" x ½"	19'-0"

ES	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T108-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

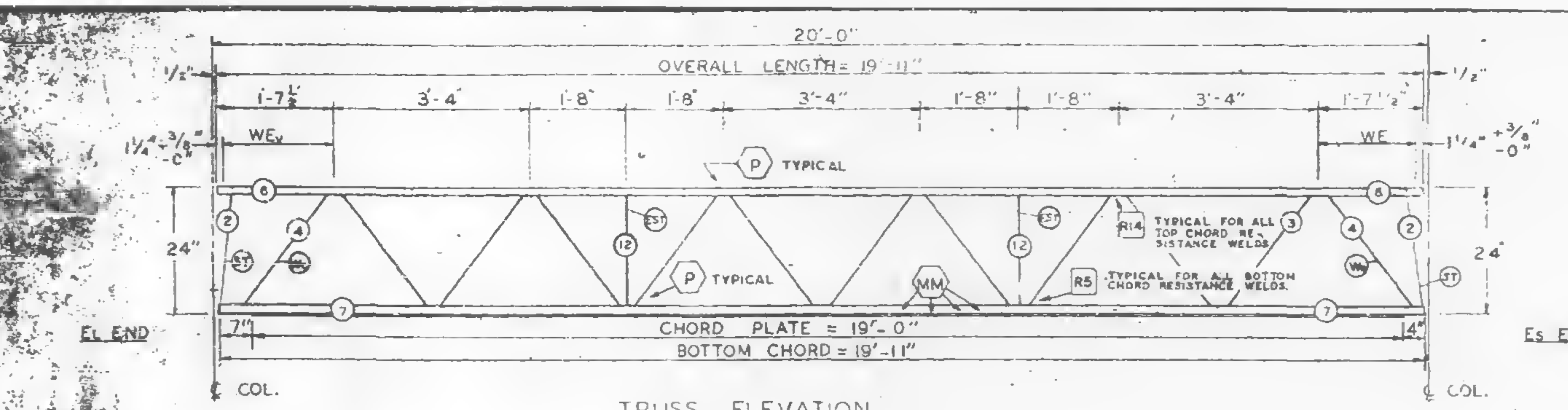
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEV	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T108-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11⅛"	—	—	—	—	—	—	4	A242	1	1.14	2'-5⅛"

NO.	DATE	REVISION	BY

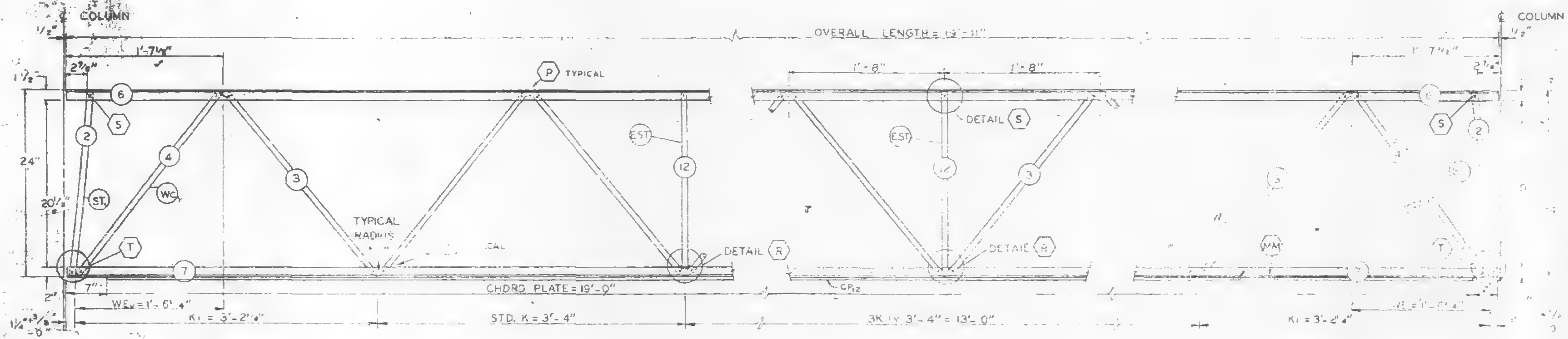
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T108 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-[illegible]-57
PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A DATE 6/6/68
DRAWN BY [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA DATE MAY 24, 1968
IN CHARGE PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY A C WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO ST210B



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2¼"	± 1/8"
WEB DEPTH	23½"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (x)
ALL WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (###)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST28? AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R5
CHORD PLATE DETAILS SHOWN ON SHEET ST282

REF. DWG.	
7-AB2-1	1-6-
7-AB2-20	1-6-
7-AB4-15,?	10-4-
7-AB4-19	12-20-
7-AB4-38	10-15-
7-AB4-16,28,41	7-22
7-AB4-18	1-6-

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	–		NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24TIDJ-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½"x½"	19'-D"

Ea END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TIDJ-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

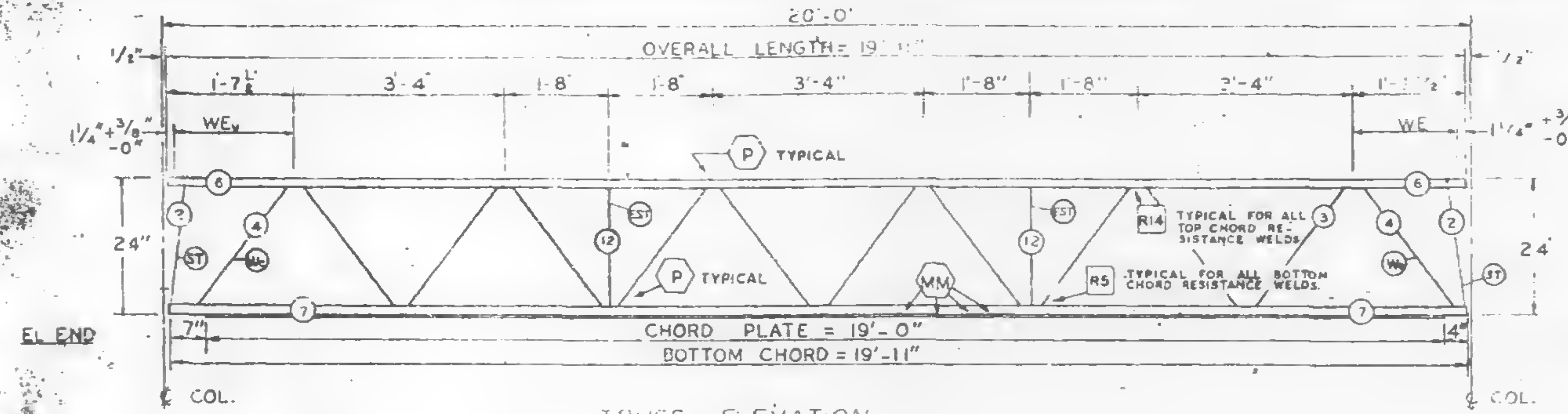
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TIOJ-1911	–	—	——	——	1'-6¼"	–	—	–	——	2	A242	1.14	1'-11¾"	—	—	——	—	—	——	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY

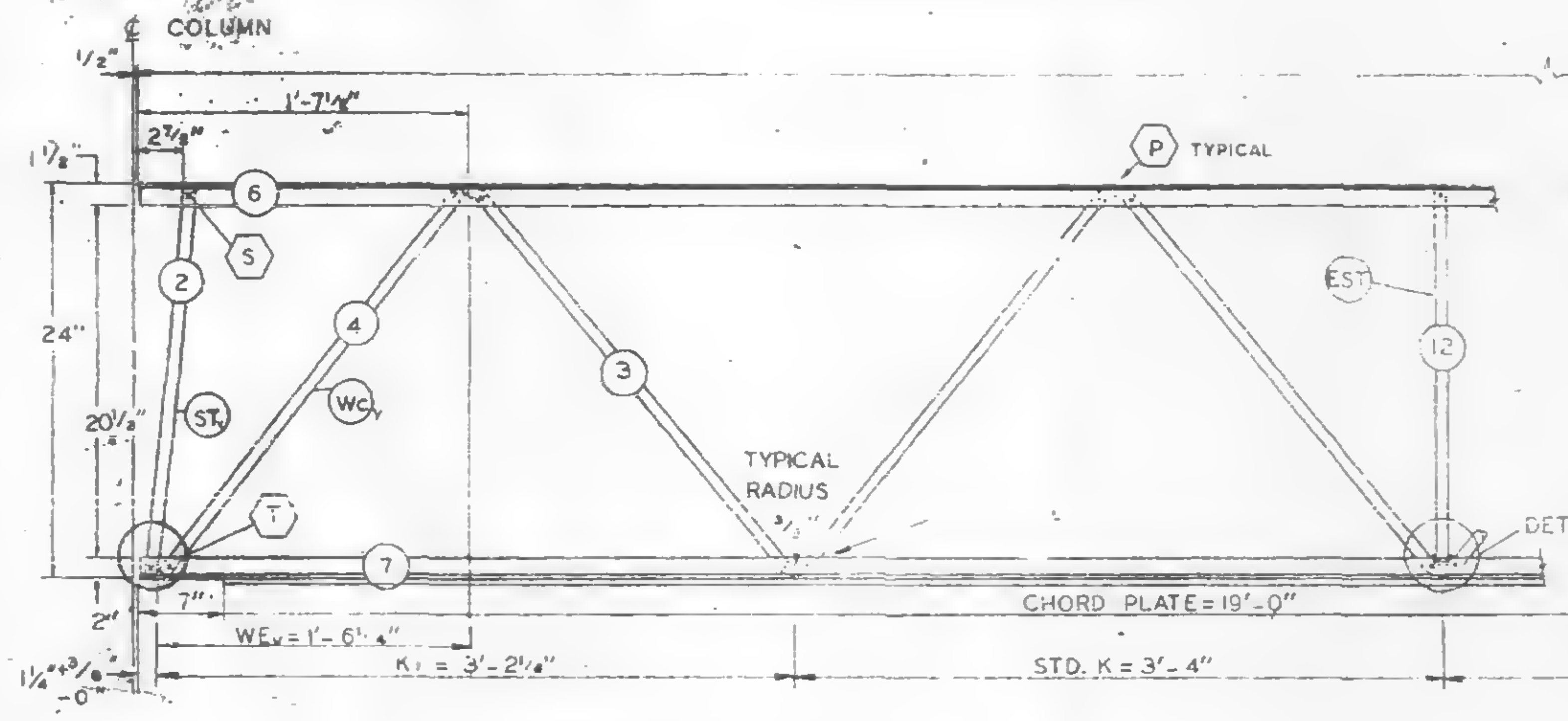
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10J x 19'-11" LONG
WORLD TRADE CENTER TOWERS · A-B

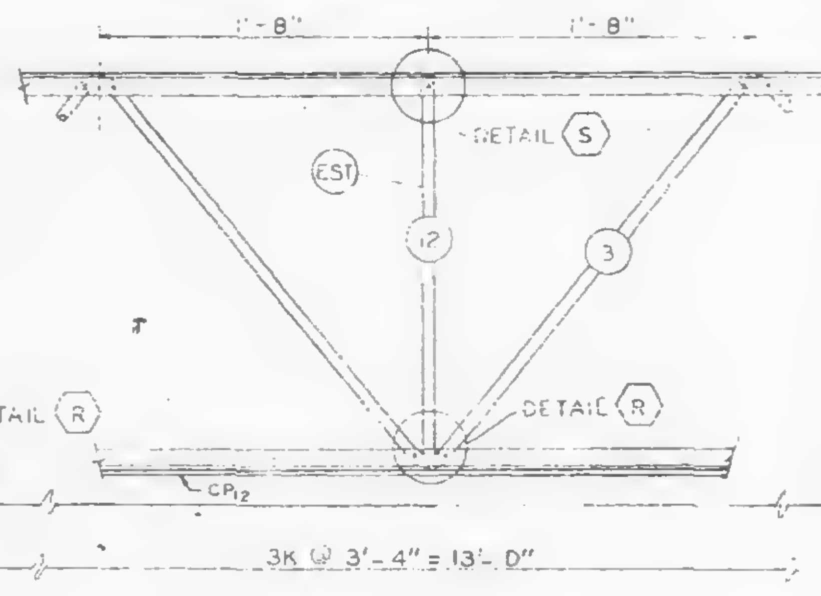
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-20
PLATE
APPROVED FOR FABRICATION BY James W. White FOR P.O.N.Y.A. DATE 2/10/69
DRAWN BY: [illegible] DATE 1-24-69
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA DATE 1-24-69
IN CHARGE PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO. W.T.C. 221
SHEET BT210



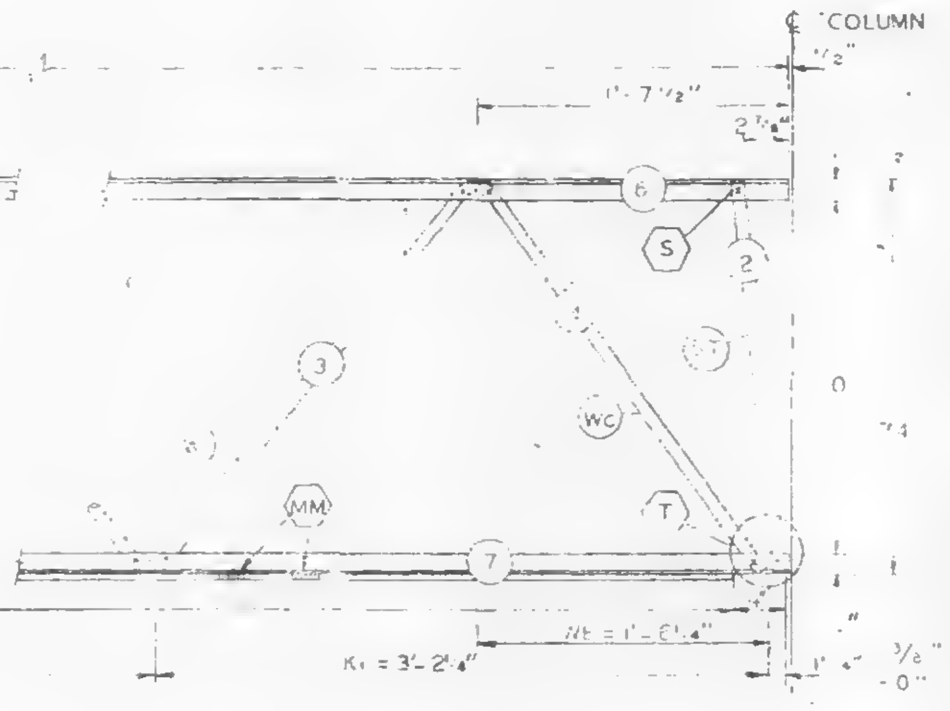
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	–	± ⅛"
DESIGN DEPTH	24"	± ⅛"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2¼"	± ¼"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅛"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282

REF DWG
7-AB2-1 1-6-69
7-AB2-20 1-6-69
7-AB4-15.1 10-4-68
7-AB4-19 12-20-68
7-AB4-38 10-15-68
7-AB4-16,28,41 7-22-68
7-AB4-18 1-6-69

PAINT
LACLEDE ELECTROCOAT
RCS NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	–		NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10K-1911	6	A242	2" x 1½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½" x ½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10K-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "STv" STRUT				END STIFFENER						WEB "Wcv"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10K-1911	—	—	——	——	1'-6¼	—	—	—	——	2	A242	1.14	1'-11¾"	—	—	——	——	—	——	4	A242	1	1.14	2'-5½"

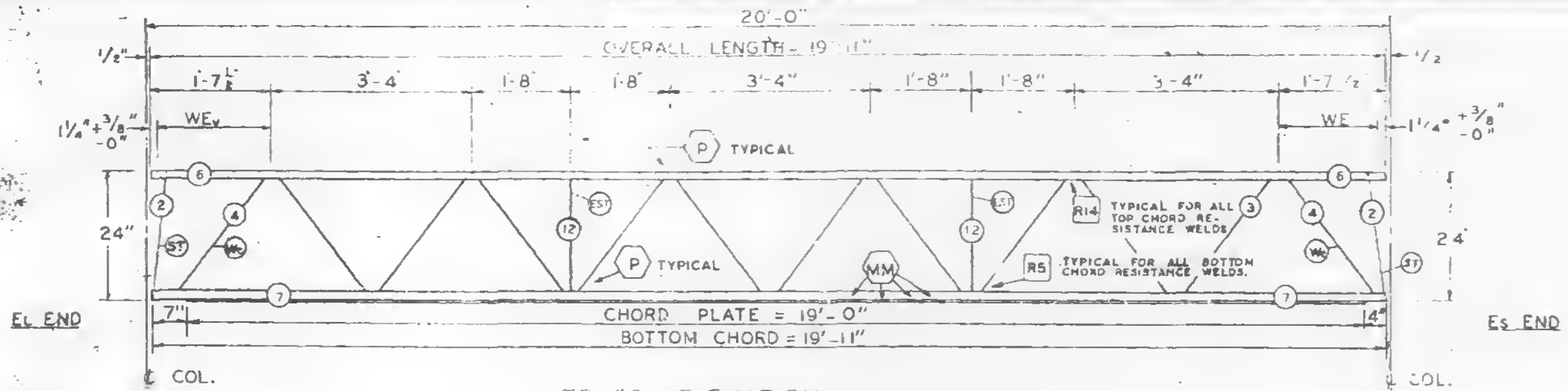
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

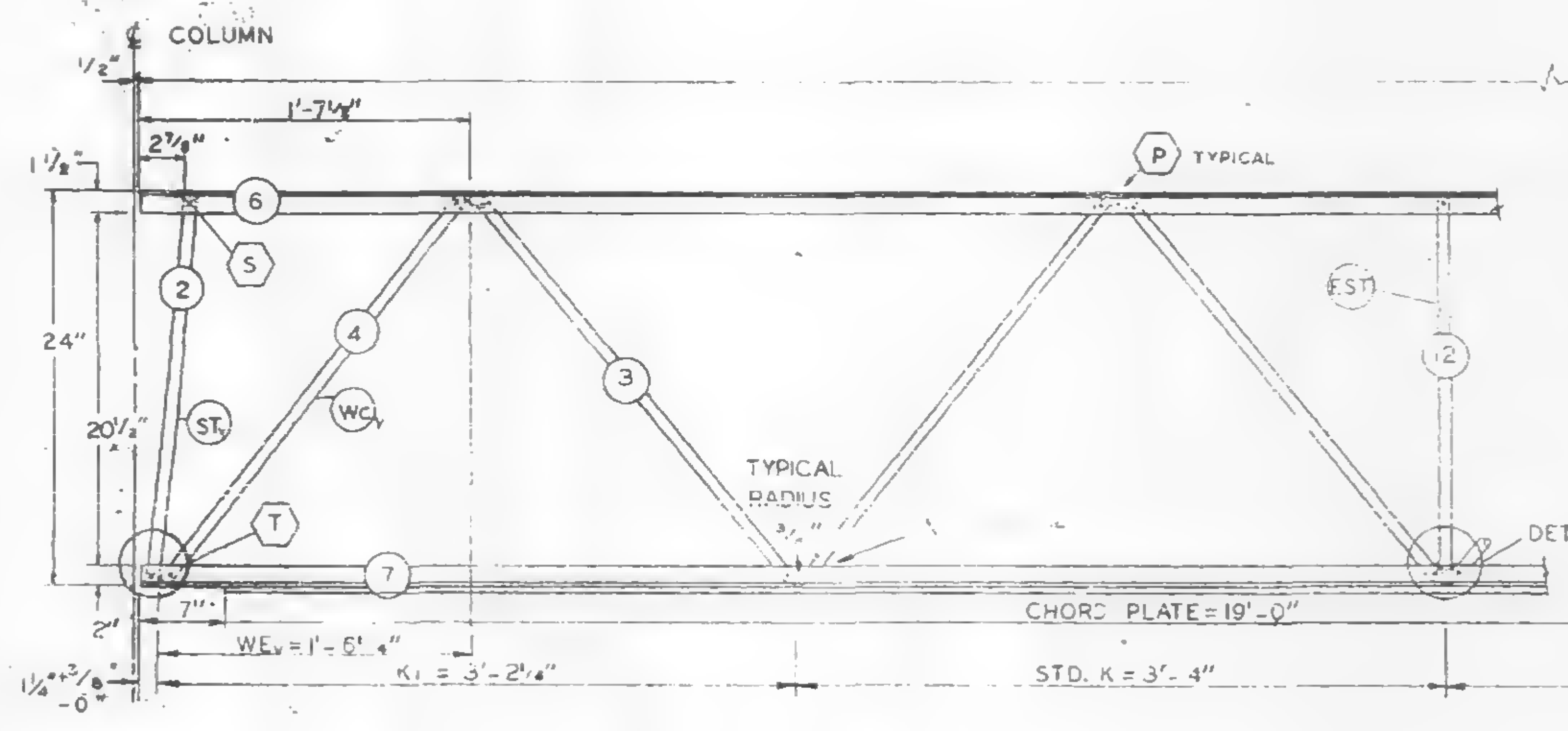
BRIDGING TRUSS 24T10K x 19'-11" LONG
WORLD TRADE CENTER TOWERS · A-B

FABRICATION BY LACLEDE STEEL COMPANY

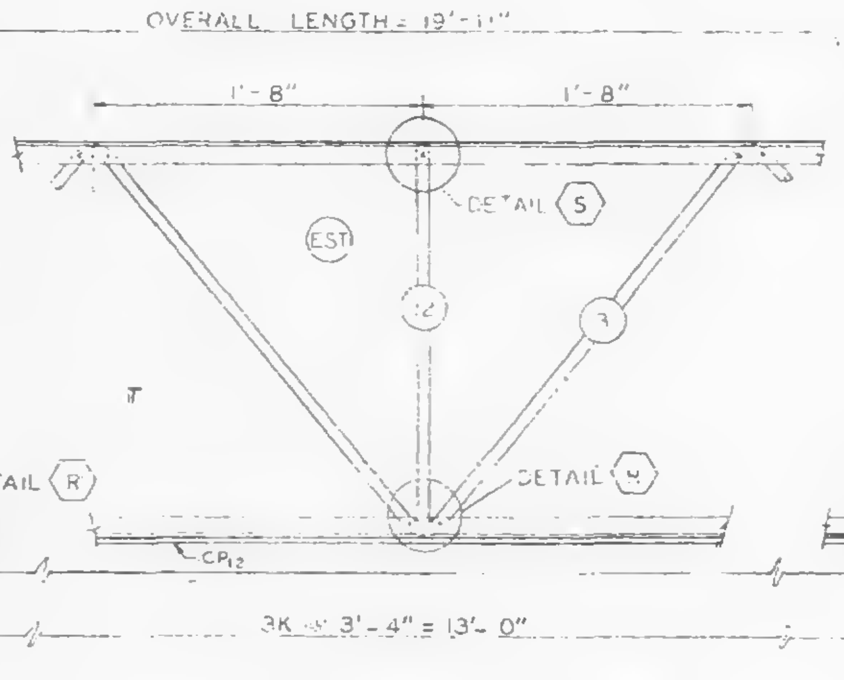
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-20	PLATE
APPROVED FOR FABRICATION BY James White FOR PONYA	DATE 2/10/69	DRAWN BY: [illegible] DATE 1-24-69	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE 1-24-69	IN CHARGE OF PROD. DEV
DETAILED BY A C WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. ST210K



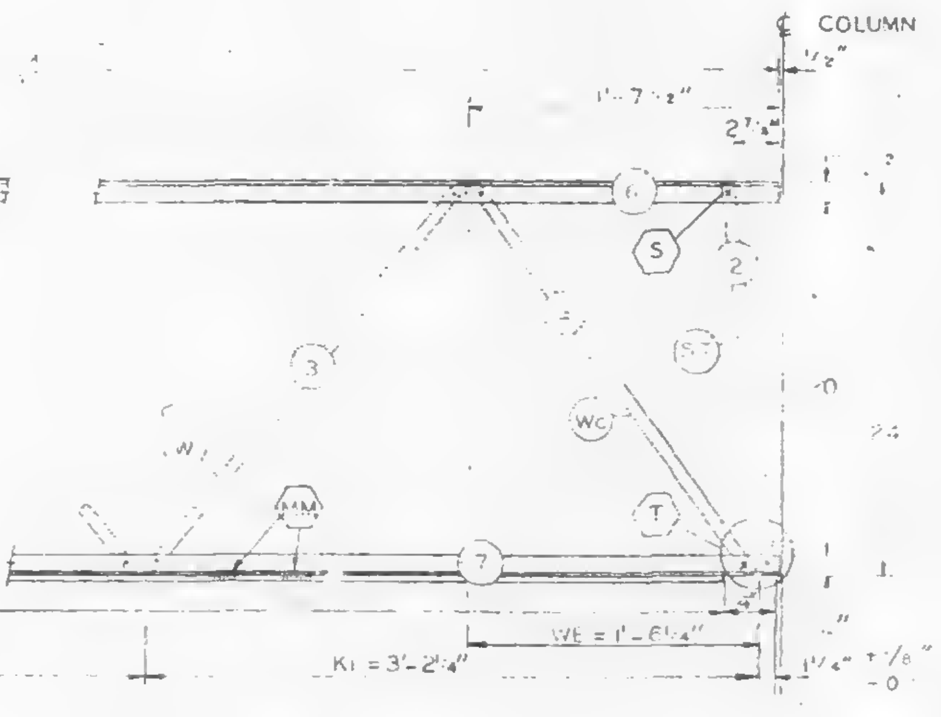
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0	+ 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/4"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282
AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie. R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282

REF. DWG.	
7-AB2-1	1-6-69
7-AB2-20	1-6-69
7-AB4-15.1	10-4-68
7-AB4-19	12-20-68
7-AB4-38	10-15-68
7-AB4-16,28,41	7-22-68
7-AB4-18	1-6-69

PAINT
L'ACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10L-1911	6	A242	2"x 1 1/2"x .31"	19'-11"	7	A36	3"x 2"x .33"	19'-11"	3	A242	1.14	25'-7 1/2"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10 7/8"	2			—	—	CP2	A36	6 1/2"x 1/2"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T10L-1911	1'-6 1/4"	2	A242	1.14	1'-11 3/4"	4	A242	1	1.14	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_v	DIAGONAL "T" STRUT				INCLINED "ST_v" STRUT				END STIFFENER						WEB "WC_v"				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T10L-1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	1.14	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	1.14	2'-5 1/2"

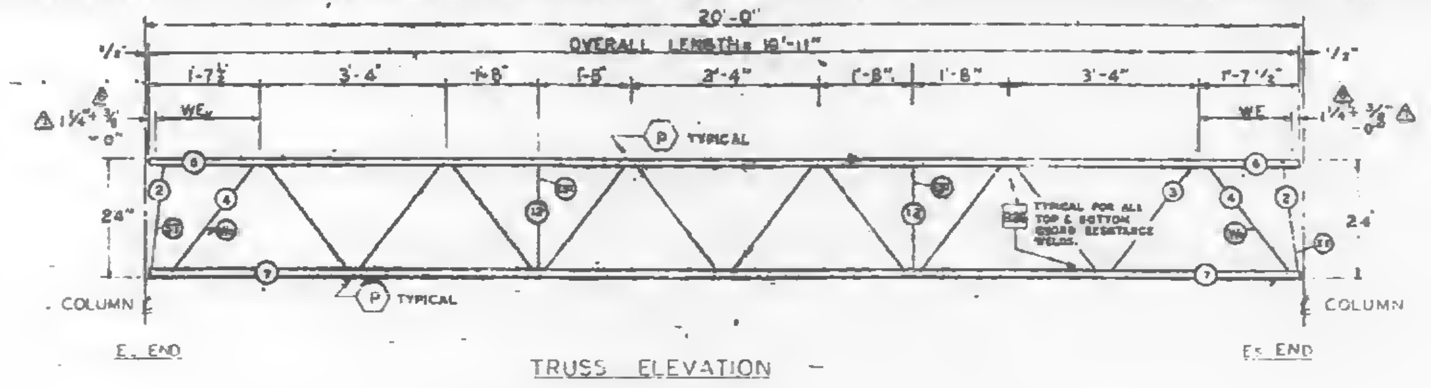
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY.

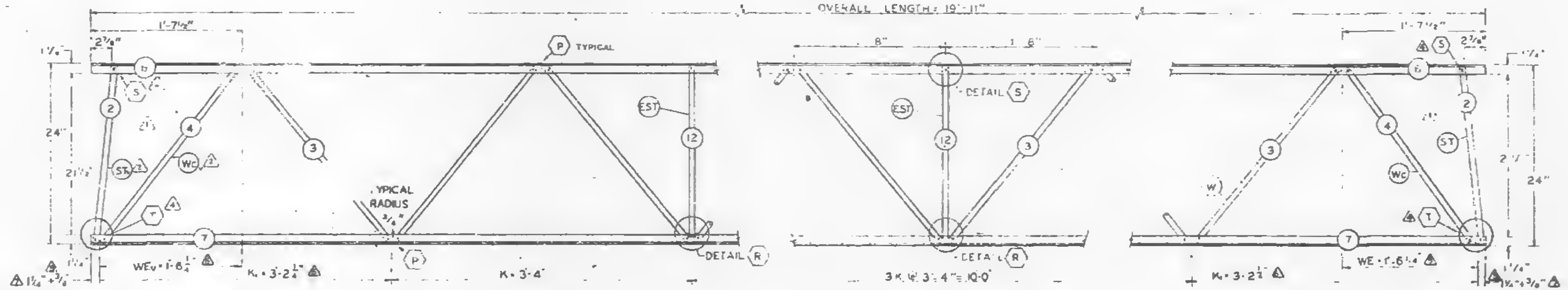
BRIDGING TRUSS 24T10L x 19'-11" LONG
WORLD TRADE CENTER TOWERS · A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-20	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A.	DATE 2/10/69	DRAWN BY: L.R. DATE 1-24-69	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE 1-24-69	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT210L



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	"0"	
DESIGN DEPTH	24	
PANEL "K"	3'-4"	
PANEL "K"	3'-2½"	
WEB DEPTH	23	
OVERALL LENGTH	19-11"	

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (TYP.)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e., Ⓐ.
△1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R29.

△2 REF DWG.
7-AB2-1 4-1-68
7-AB2-6 2-15-68
7-AB4-15.1 1-2-68
7-AB4-18/6 5-6-68
7-AB4-28, 19 & 41 1-3-68
7-AB4-36 4-1-68

PAINT
LACLEDE ELECTROCOAT
REQ NO 1000

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO. OF P	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24TII-1911	6	A242	1¼"x1¼"x.230	19'-11"	7	A242	1"x1¼"x.230	19'-11"	3	A242	.75	2'5-7⅛"	5X = 3'-4" = 16'-8"	12	A242	.75	1'-10⅞"	2			—	—

ES END	TRUSS DESIGNATION	WE	INCLINED 'ST' STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TII-1911	1'-6¼"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEr	DIAGONAL "T" STRUT				INCLINED "ST" STRUT △2				END STIFFENER MK V5			END STIFFENER MK V6			WEB "WC" △3				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TII-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

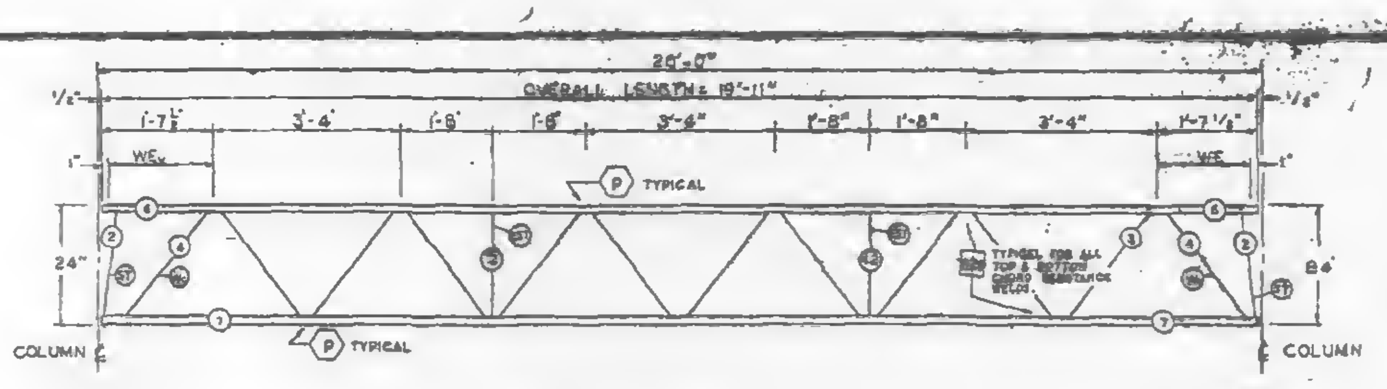
NO.	DATE	REVISION	BY
△7	8-29-68	END DIST ②	T.M.C.
△6	8-26-68	AS NOTED	T.M.C.
△5	7-27-68	END DIST ②	T.M.C.
△4	7-8-68	AS NOTED	T.M.C.
△3	7-3-68	MAIN WEB	T.M.C.
△2	6-26-68	AS NOTED	T.M.C.
△1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

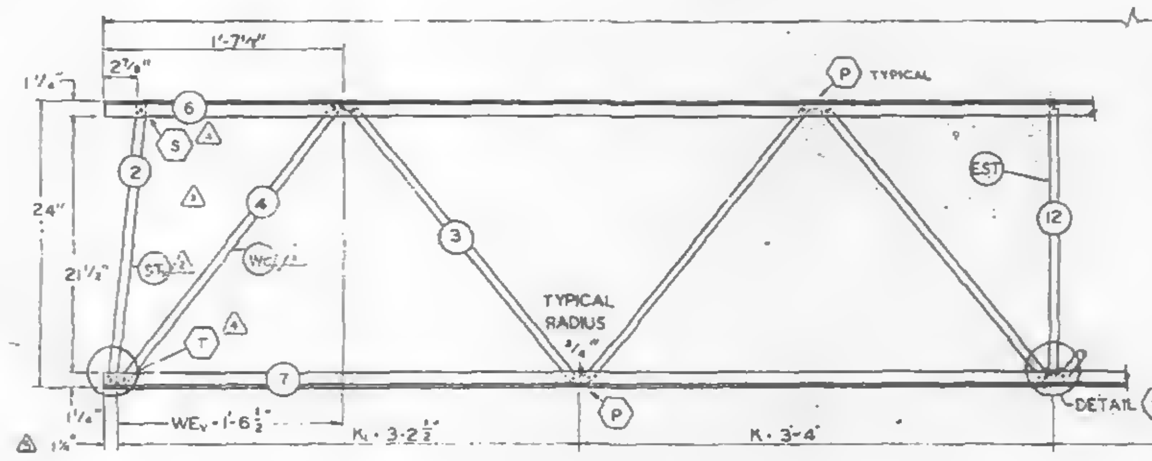
BRIDGING TRUSS 24TII 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

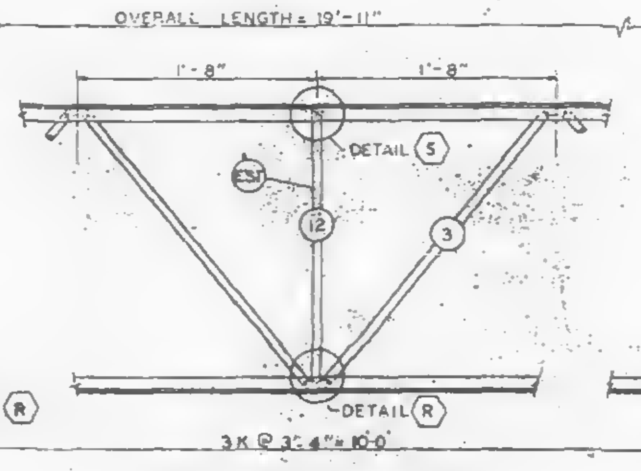
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-AB2-6 PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A. DATE 9/4/68	DRAWN BY DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY DATE FEB 24, 1968 / IN CHARGE OF
DETAILED LACLEDE STEEL CO.	FABRICATION CONT. NO. WTC 221 / SHEET NO. ST2[illegible]



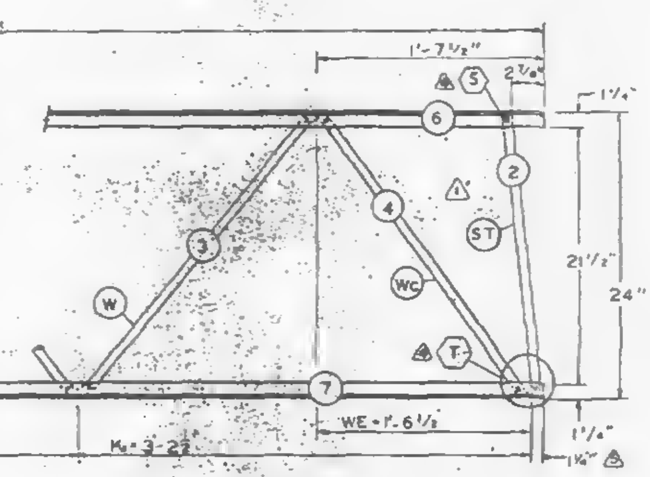
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24"	± ⅛"
PANEL "K"	3'-4"	± ⅛"
PANEL "KS"	3'-2½"	± ⅛"
WEB DEPTH	23⅛"	± ⅛"
OVERALL LENGTH	19'-11"	± ⅛"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
△1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

△2 REF. DWG
7-AB2-1 4-1-68
7-AB2-6 2-15-68
7-AB4-15.1 1-2-68
7-AB4-18.19 5-6-68
7-AB4-28, 19 & 41 1-3-68
7-AB4-38 4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24TII - 1911	6	A242	1½"x1¼"x 230	19'-11"	7	A242	1½"x1¼"x 230	19'-11"	3	A242	.75	25'-7½" △3	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞" △2	2			—	—

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TII - 1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEV	DIAGONAL "T" STRUT				INCLINED "STL" STRUT △1				END STIFFENER						WEB "Wc" △2				
															MK VS			MK VS							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TII - 1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

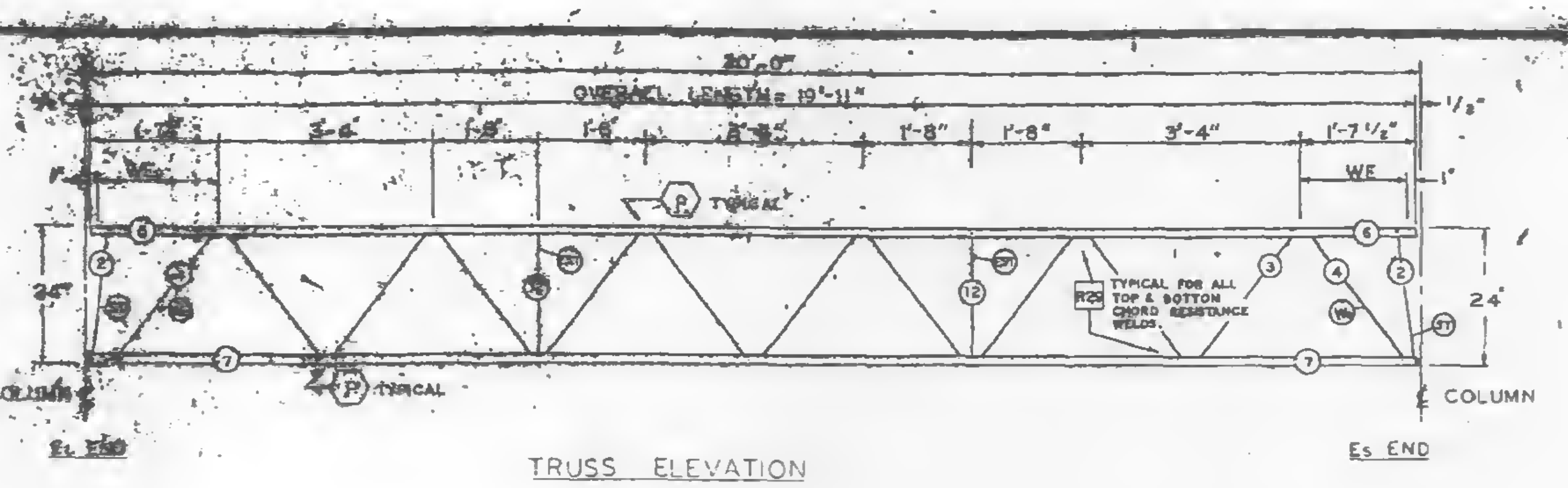
△	[illegible]	END DIST ②	T.M.C.
△	[illegible]	AS NOTED	T.M.C.
△	[illegible]	MAIN WEB	T.M.C.
△	[illegible]	AS NOTED	T.M.C.
△	[illegible]	WEB	J.R.P.
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

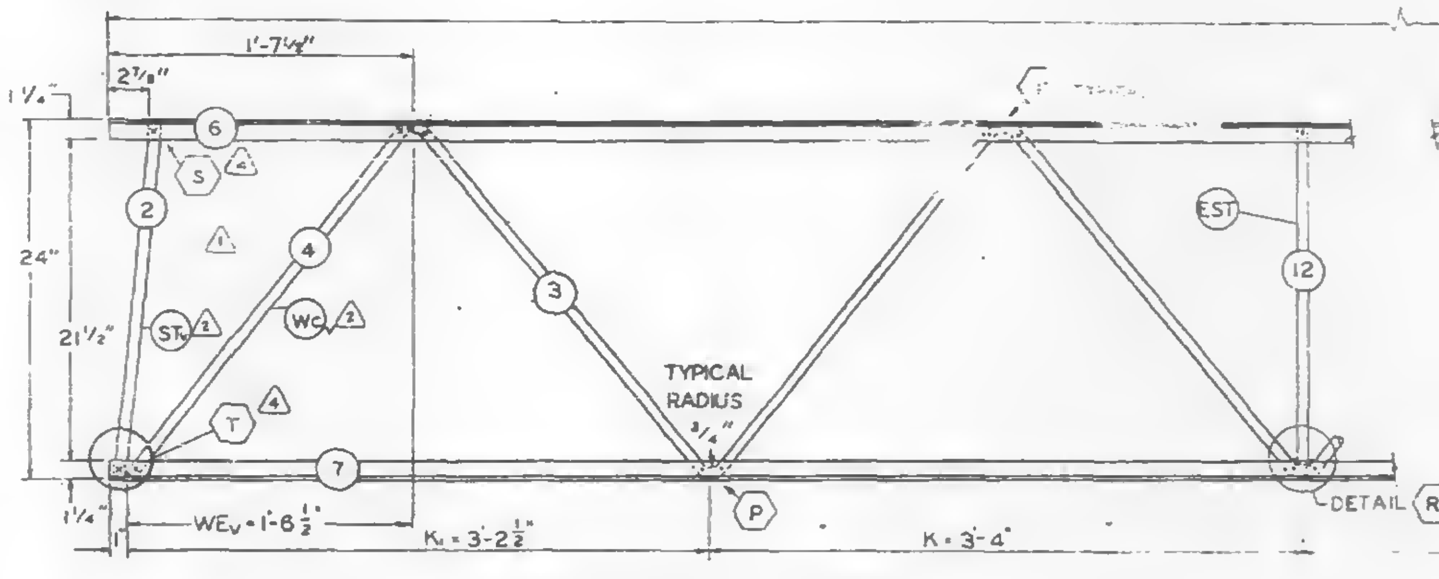
BRIDGING TRUSS 24TII x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

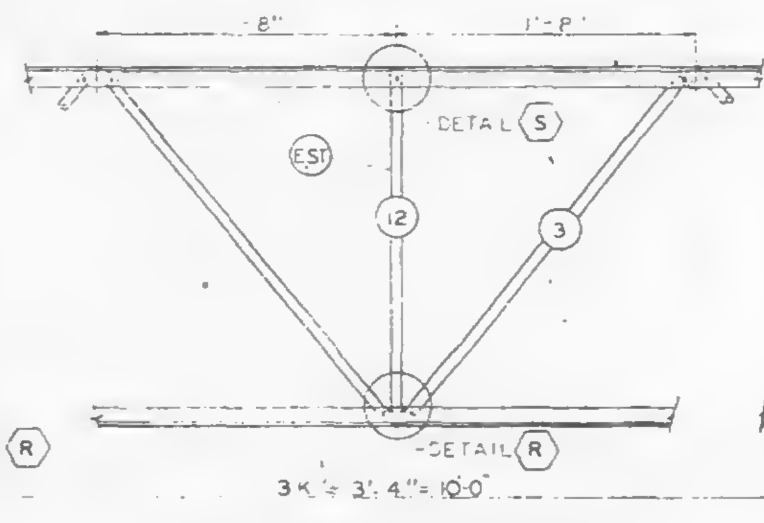
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A DATE 8/2/68	DRAWN BY [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER	FABRICATION CONT. NO W.T.C. 221	SHEET NO. ST211



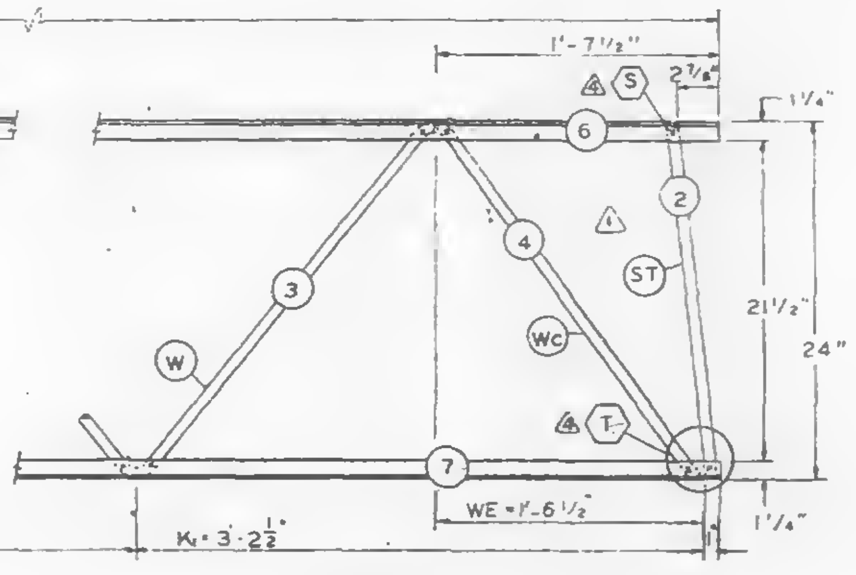
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⬡A
⚠1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., $\boxed{R29}$.

FABRICATION REQUIREMENTS

	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24"	± ⅛"
PANEL "K5"	3'-4"	± ⅛"
PANEL "K"	3'-2¾"	± ⅛"
WEB DEPTH	23⅞"	± ⅛"
OVERALL LENGTH	19'-11"	± ⅛"

⚠2 REF. DWG. 7-AB2-1 4-1-68
7-AB2-6 2-15-68
7-AB4-15.1 1-3-68
7-AB4-15.18 5-6-68
7-AB4-28, 19 & 41 1-3-68
7-AB4-38 4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN-WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T[illegible]	6	A242	1½"x1¼"x.230"	19'-11"	7	A242	1½"x1¼"x.230"	19'-11"	3	A242	.75	25'-7½" ⚠3	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞" ⚠2	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED 'ST' STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT ⚠1				END STIFFENER						WEB "Wc" ⚠2				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

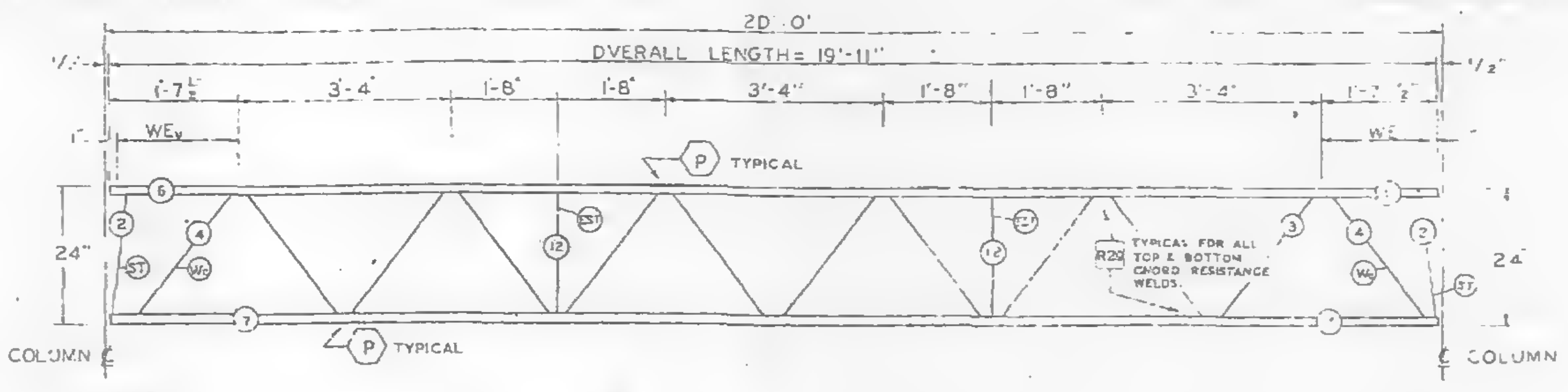
NO.	DATE	REVISION	BY
⚠4	7-8-68	AS NOTED	T.M.C.
⚠3	7-3-68	MAIN WEB	T.M.C.
⚠2	6-26-68	AS NOTED	T.M.C.
⚠1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

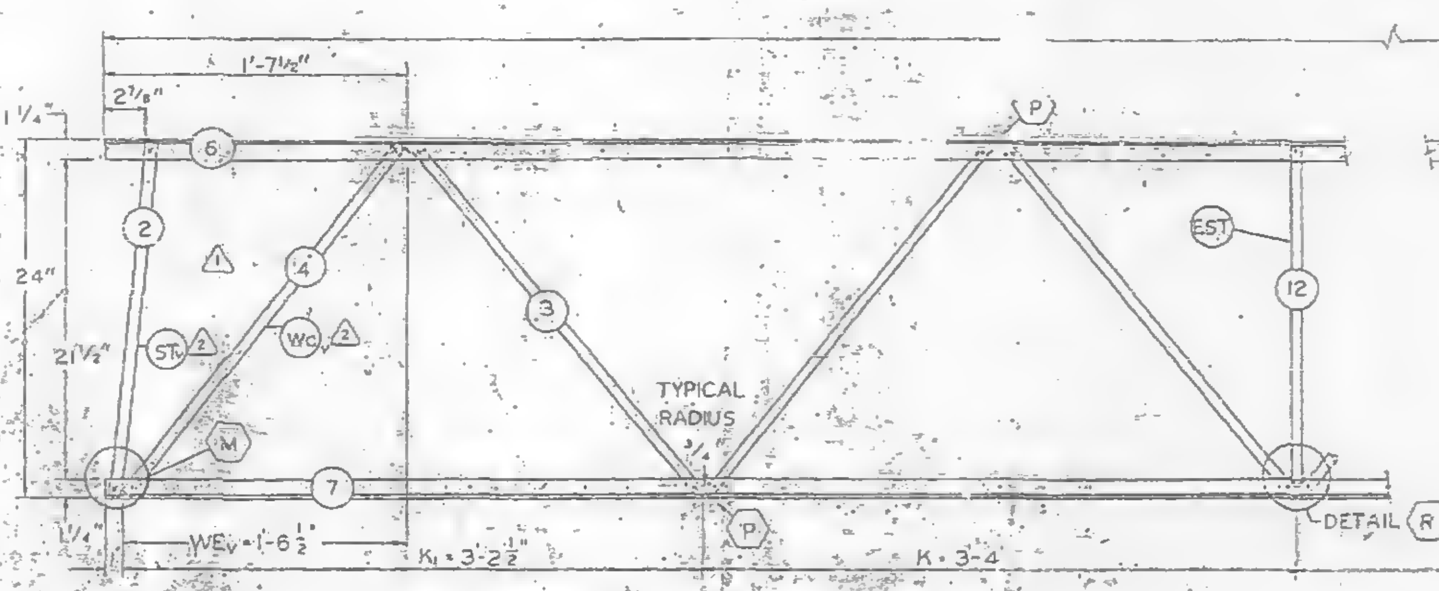
BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

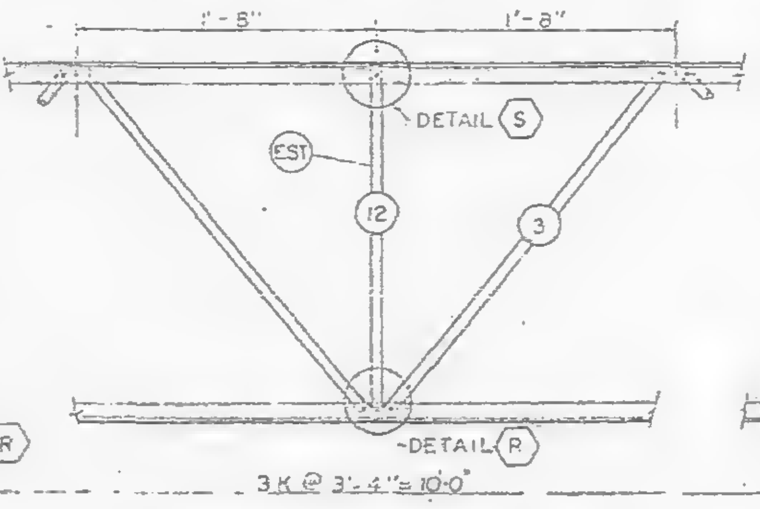
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY: JW FOR P.O.N.Y.A	DATE 7/9/68	DRAWN BY: DATE FEB 24 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R.PAUL DATE FEB 24 1968	IN CHARGE OF PROD. - DEV.
DETAILER LACLEDE STEEL CO.		FABRICATION CONT. NO W.T.C. 221	SHEET NO. BT211



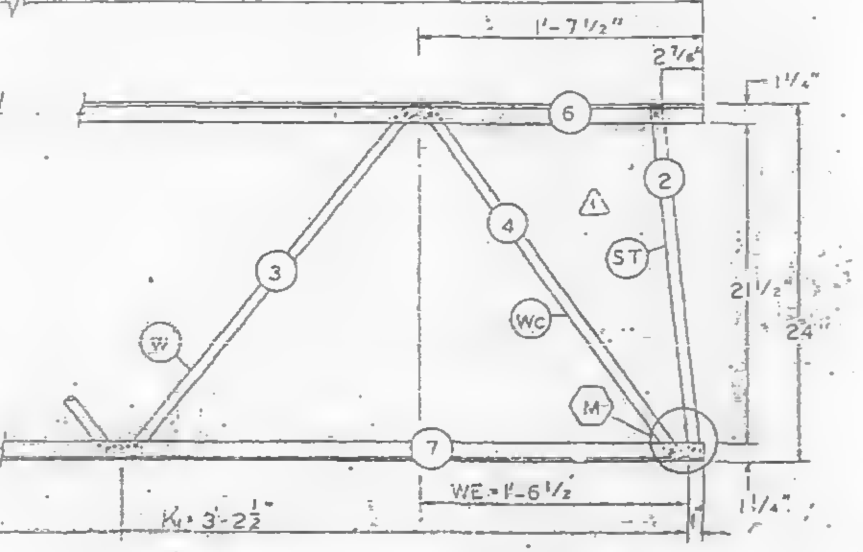
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (////).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.

2 REF. DWG.	
7-AB2-1	4-1-68
7-AB2-6	2-15-68
7-AB4-15	1-2-68
7-AB4-16, 18	5-6-68
7-AB4-28, 19 & 41	1-3-68
7-AB4-36	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	PC STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
2[illegible]	6	A242	1 1/2" x 1 1/4" x .230"	19'-11"	7	A242	1 1/2" x 1 1/4" x .230"	19'-11"	3	A242	.75	30.6 1/2"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 7/8" 2	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

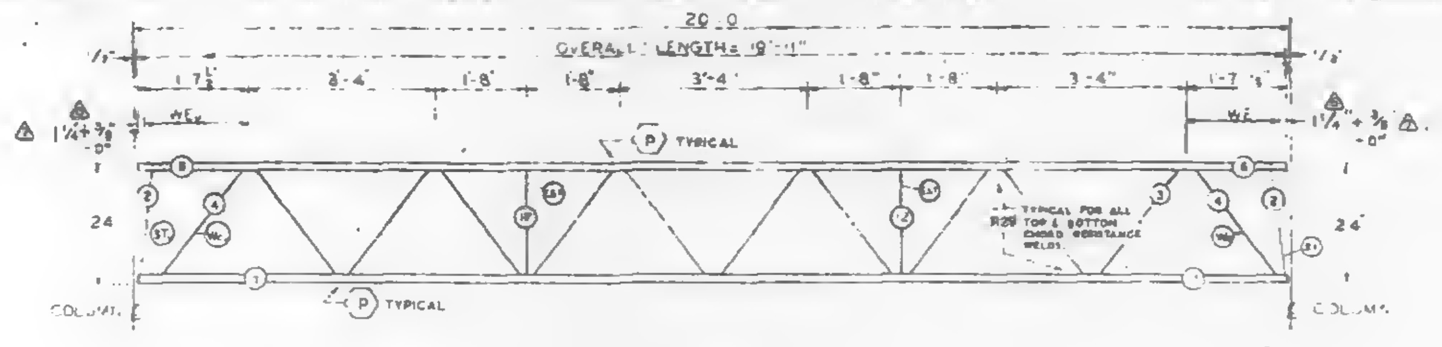
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "STv" STRUT 2				END STIFFENER						WEB "Wcv" 2				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

NO.	DATE	REVISION	BY
2	6-26-68	AS NOTED	T.M.C.
1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

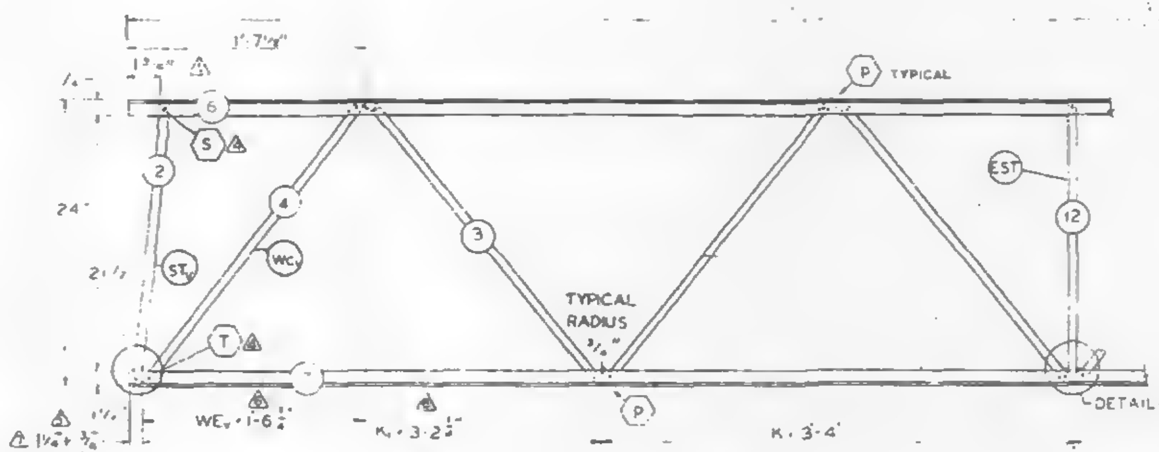
BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-6
PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A DATE 7/5/68
DRAWN BY [illegible] DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY J.R. PAUL DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY E. C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO BT211

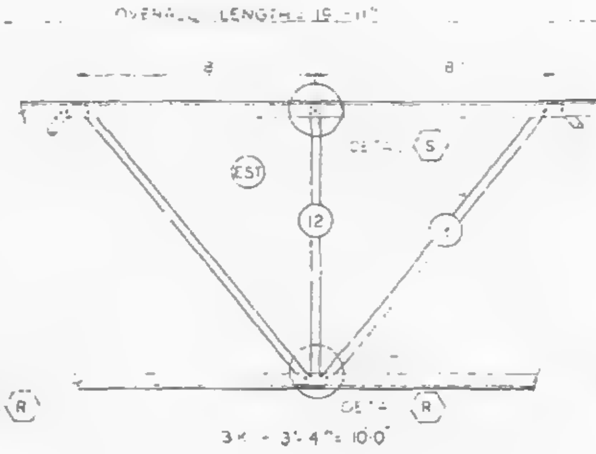


TRUSS ELEVATION

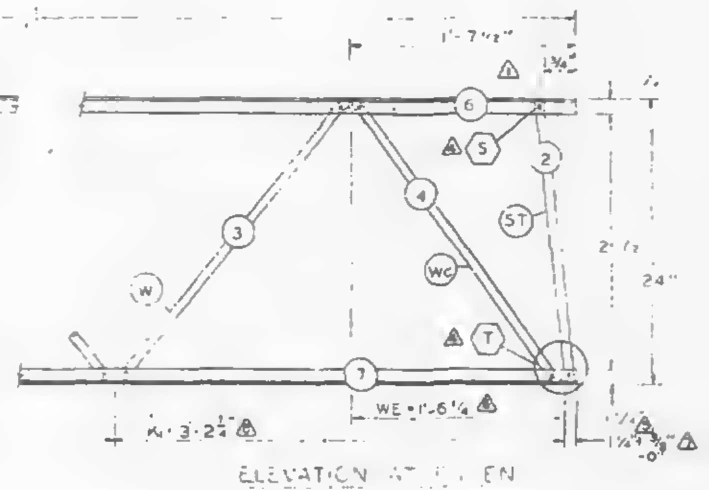
FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ½"
END "K₁"	3'-2½"	± ½"
WEB DEPTH	23½"	± ¼"
OVERALL LENGTH	19'-11"	± ⅛"



ELEVATION AT E_L END



ELEVATION AT [illegible]



ELEVATION AT E_S END

ALL PANEL POINTS RESISTANCE WELDED (*) ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (****) ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A) LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF DWG 7-AB2-1 ______ 4-1-68 ⚠4
7-AB2-5 ______ 2-5-68
7-AB4-15,1,10 ______ 1-2-68 ⚠2
7-AB4-16,19 ______ 5-8-68 ⚠2
7-AB4-43,41 ______ 1-3-68 ⚠2
7-AB4-38 ______ 4-1-68 ⚠1

PAINT
LACLEDE ELECTROCOAT
RED NO 10DC

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					[illegible]	FILLER	
	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	[illegible]		NO.	DIA
24TIIA-1911	6	A242	1½x1¼x.230	19'-11"	7	A242	1¼x1¼x.230	19'-11"	3	A242	.75	25'-7½" ⚠3	5K ± 3'-4" = 16'-8"	12	A242	.75	1'-10⅛" ⚠2	2	—	—	—

E_S END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
		⚠5	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TIIA-1911	1'-6¼"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

E_L END	TRUSS DESIGNATION	BEARING ANGLES				WE_L	DIAGONAL "T_L" STRUT				INCLINED "ST_L" STRUT				END STIFFENER						WEB "WC_L"				
															MK Y5			MK Y6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH	⚠6	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TIIA-1911	—			—	1'-6⅛"			—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

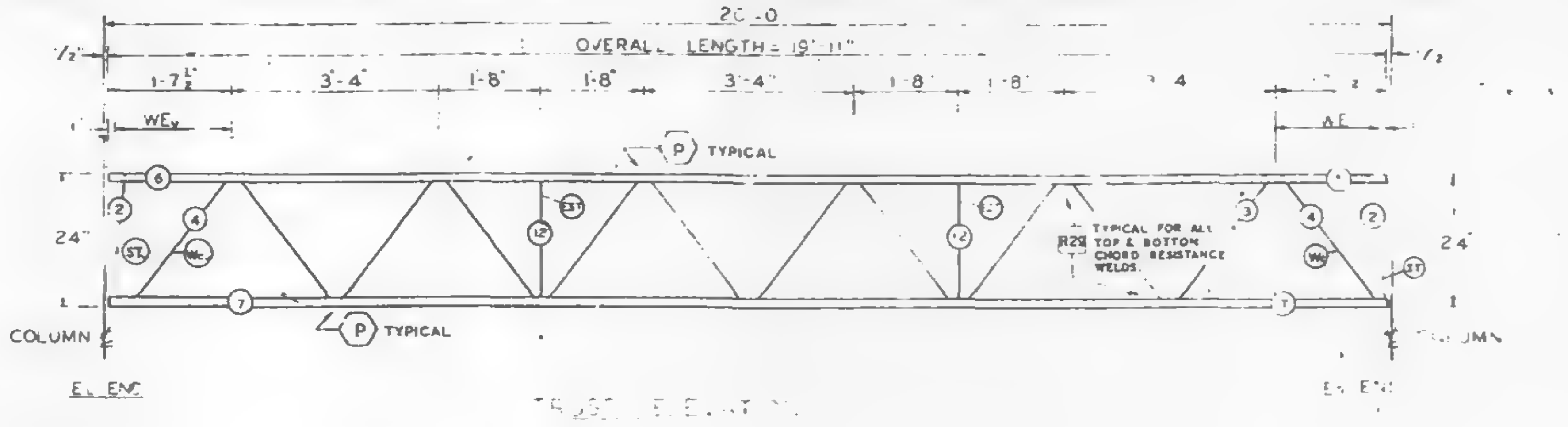
NO.	DATE	REVISION	BY
⚠7	8-29-68	END DIST. ②	T.M.C.
⚠6	8-28-68	AS NOTED	T.M.C.
⚠5	7-27-66	END DIST. ②	T.M.C.
⚠4	7-8-68	AS NOTED	T.M.C.
⚠3	7-3-68	MAIN WEB	T.M.C.
⚠2	6-26-68	LENGTH OF "EST." REF. DWG.	T.M.C.
⚠1	4-25-68	END STRUT DIMENSIONS	T.M.C.

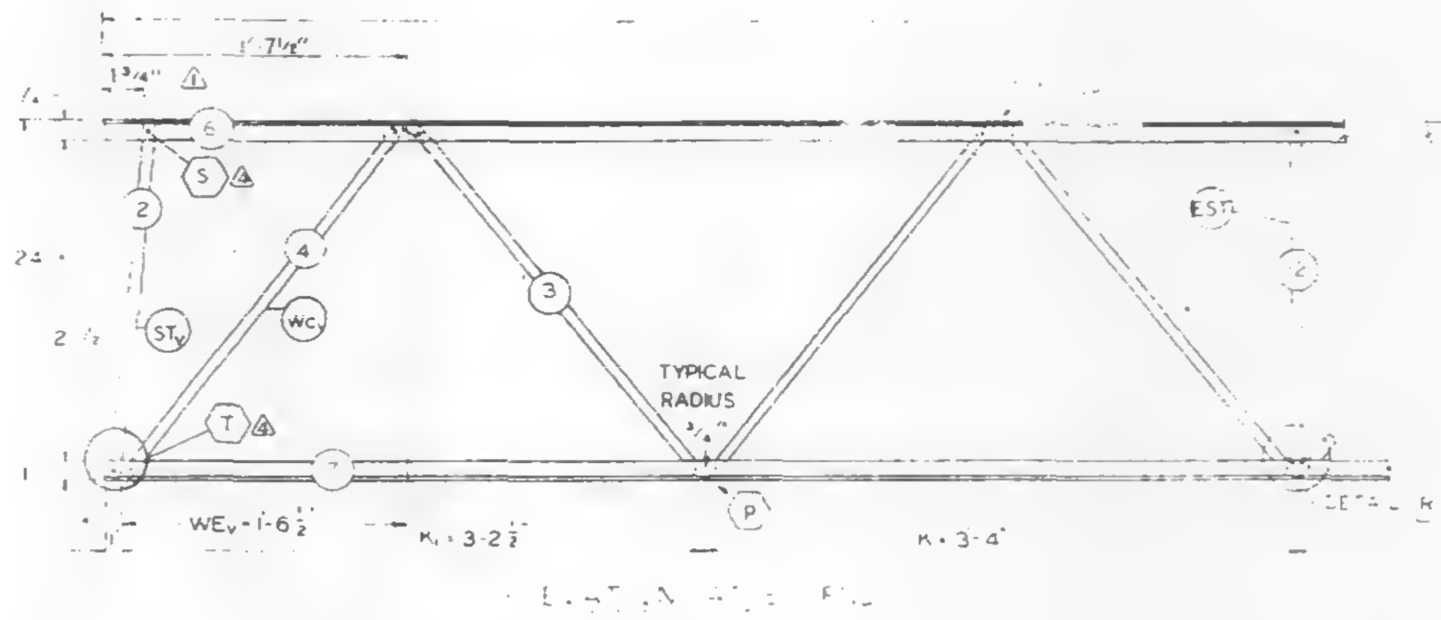
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

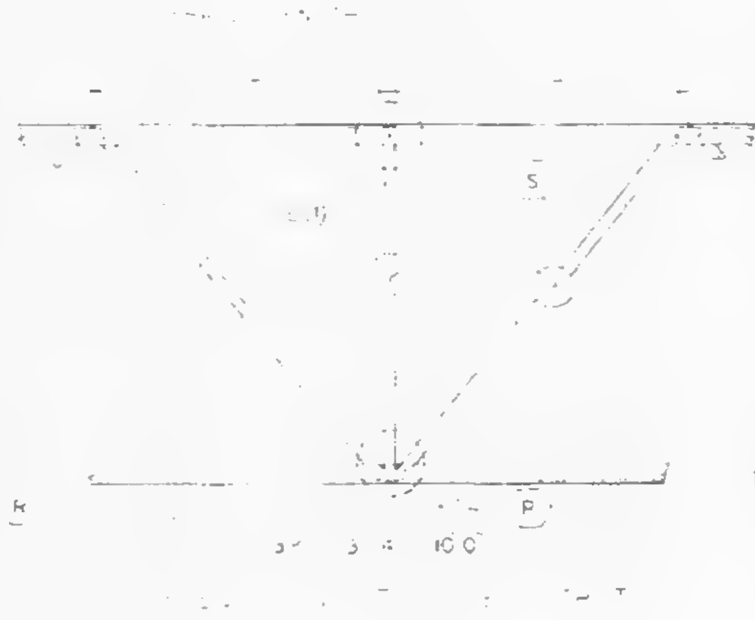
BRIDGING TRUSS 24TIIA x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

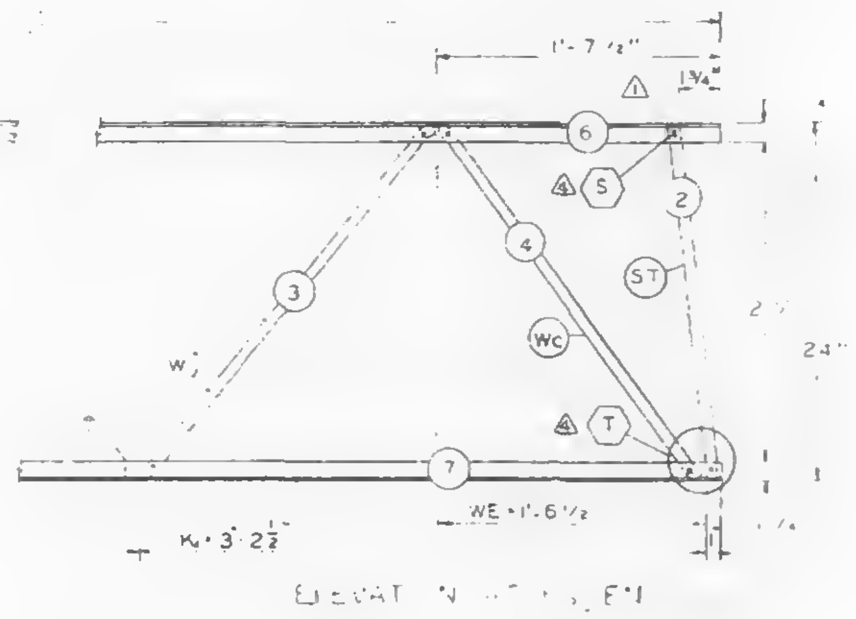
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY James White FOR PONYA	DATE 9/4/68	DRAWN BY T.R. DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF PROD DEV
DETAILED BY A C WEBER		FABRICATION CONT NO W T C 221	SHEET NO BT211A









FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2½"	± ¼"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (X) ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬) ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF DWG	
7-AB2-1	4-1-68 △
7-AB2-6	2-15-68
7 AB4-15.1.19	1-3-68 △
7 AB4-16.18	5-6-68 △2
7 AB4-28.41	[illegible] △2
7 AB4-38	4-1-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO [illegible]

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"						VERTICAL "EST" STRUT				TRUSS DATA	FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	N	[illegible]	MK	TYPE STEEL	DIA	LENGTH		NO.	DIA
[illegible]-1911	6	A242	1½ x 1¼ x 230	19'-11"	7	A242	1½ x 1¼ x 230	19'-11"	3	A242	.75	25'-7½" △3	5K	3'-4" = 6'-8"	12	A242	.75	1'-10⅞ △2		—	—

Es END TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T11A-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

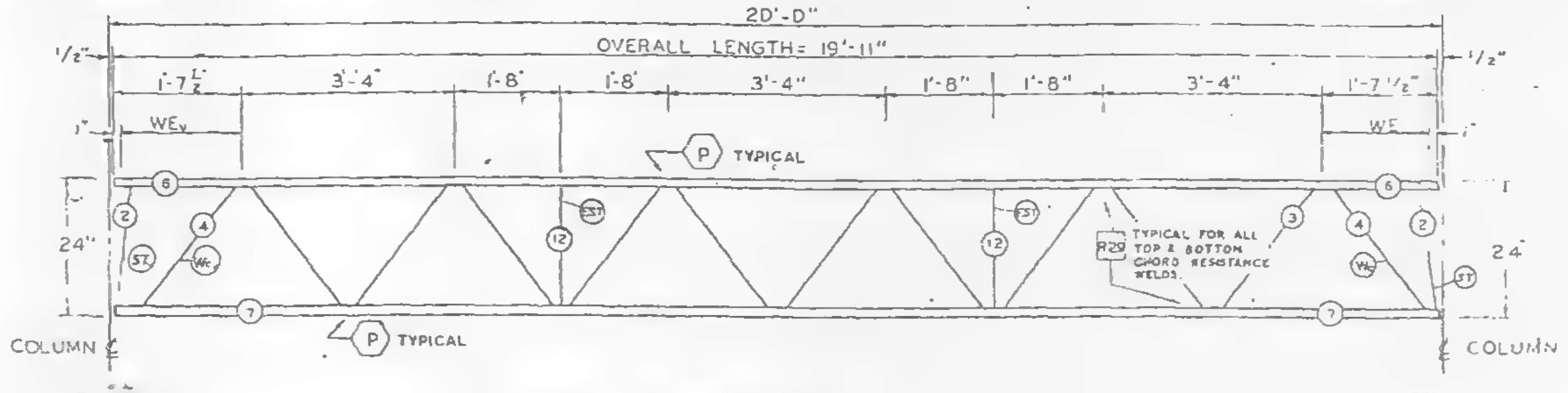
EL END TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				INCLINED "STv" STRUT				END STIFFENER						WEB Wcv				
	MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T11A-1911	—	—	—	—	1'-6½	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO.	DATE	REVISION	BY
△4	7-8-68	AS NOTED	T.M.C.
△3	7-3-68	MAIN WEB	T.M.C.
△2	6-26-68	LENGTH OF "EST." REF. DWG.	T.M.C.
△1	4-25-68	END STRUT DIMENSIONS	T.M.C.

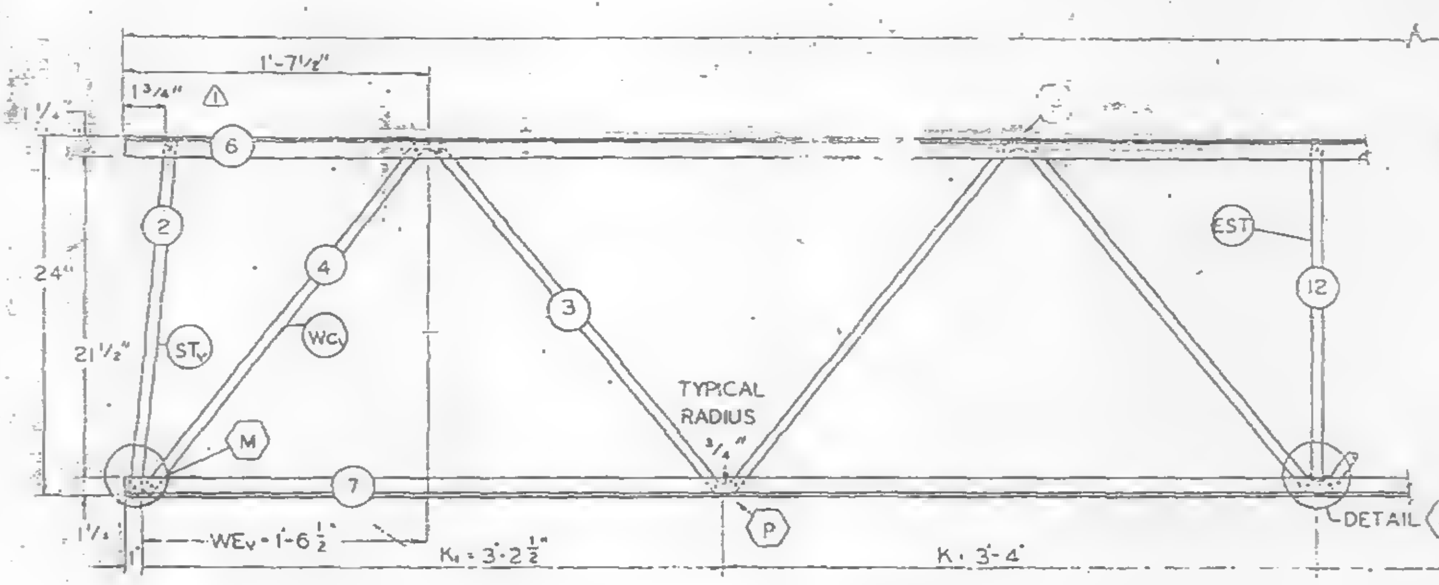
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

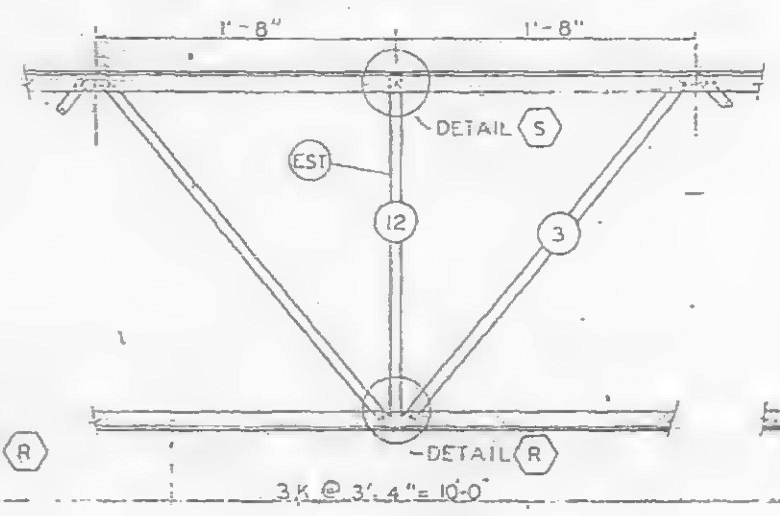
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7 AB2-6 PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA DATE 7/9/68
DRAWN BY L.B. DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY J.R.PAUL DATE FEB 24, 1968
IN CHARGE OF PROD [illegible]
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO BT211A



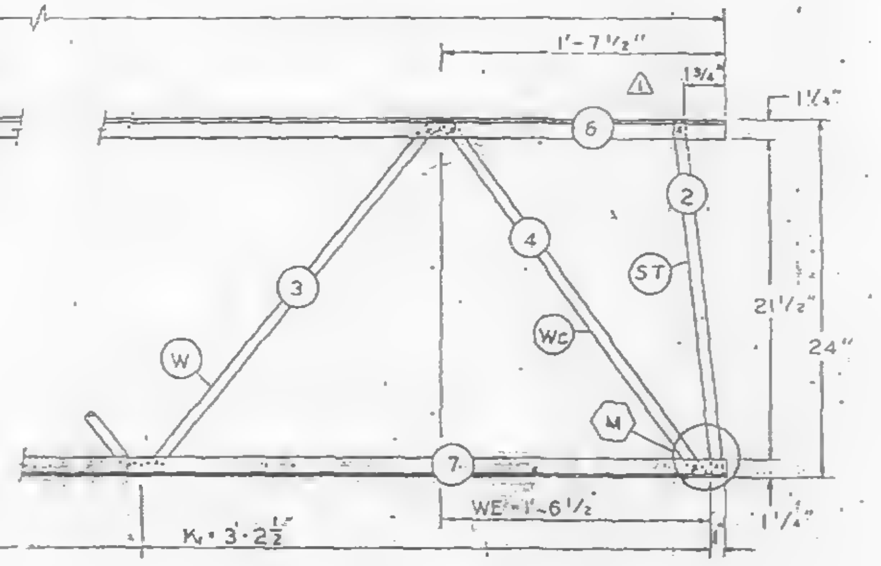
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "Kv"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (****).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DWG. 7-AB2-1 4-1-68 2
7-AB2-5 2-15-68
7-AB4-15,1,19 1-3-68 2
7-AB4-16,18 5-6-68 2
7-AB4-29,41 1-3-68 2
7-AB4-38 4-1-68 2

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
[illegible]-1911	6	A242	1 1/2" x 1 1/4" x .230	19'-11"	7	A242	1 1/2" x 1 1/4" x .230	19'-11"	3	A242	.75	30'-6 1/2"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 7/8" 2	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

El END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				INCLINED "STv" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wcv"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 1/4"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

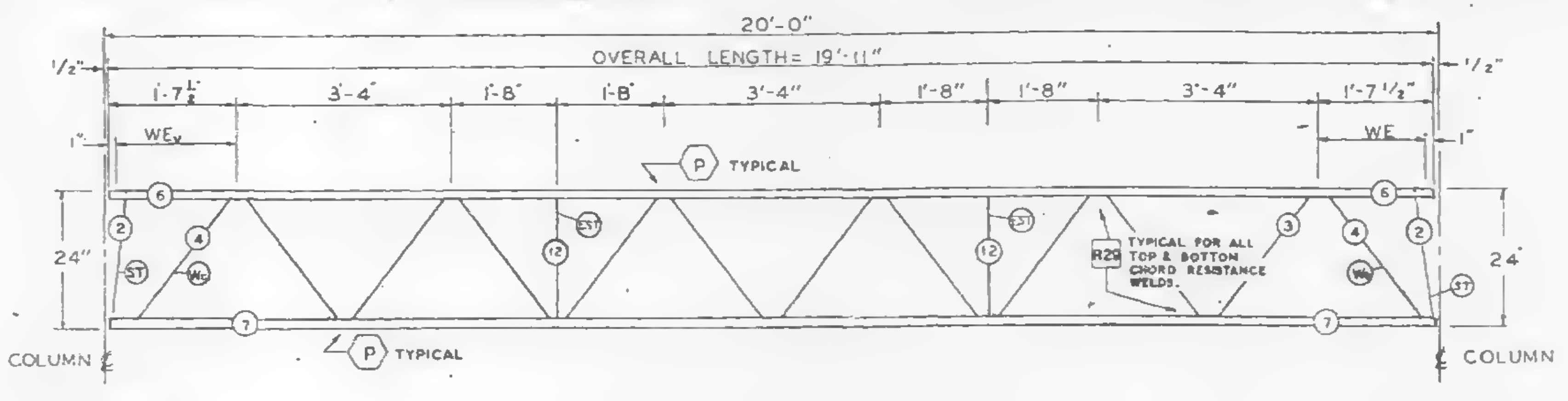
NO.	DATE	REVISION	BY
2	6-26-68	LENGTH OF "EST." REF. DWG.	T.M.C.
1	4-25-68	END STRUT DIMENSIONS	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

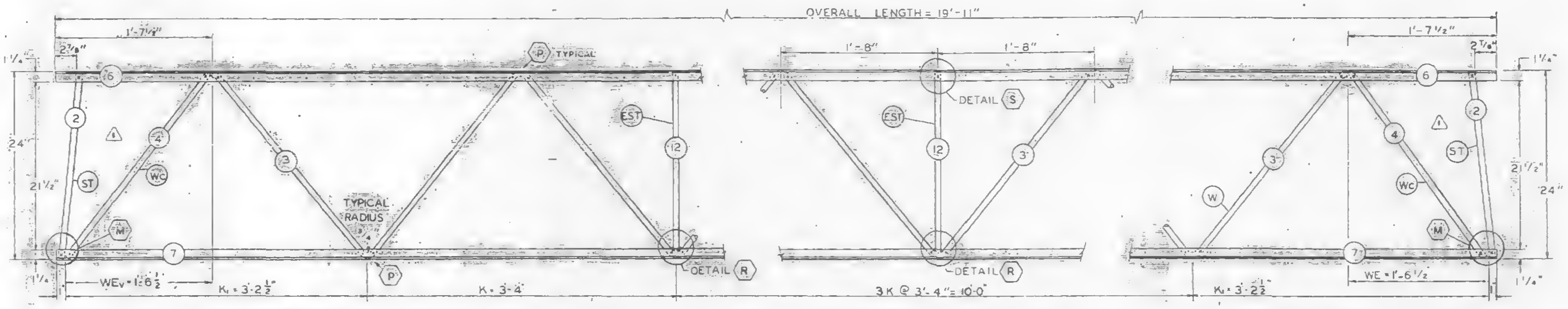
BRIDGING TRUSS 24T11A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY: JW FOR P.O.N.Y.A.	DATE 7/5/68	DRAWN BY [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A. C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT211A



TRUSS ELEVATION



ELEVATION AT E_L END

ELEVATION AT ADDED STRUT

ELEVATION AT E_S END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K_1"	3'-2½"	± ¼"
WEB DEPTH	23½"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST29D AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⬡A.
⚠1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11-1911	6	A242	1½"x1¼"x.230	19'-11"	7	A242	1½"x1¼"x.230	19'-11"	3	A242	.75	30'-6½"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞"	2			—	—

E_S END	TRUSS DESIGNATION	WE	INCLINED 'ST' STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

E_L END	TRUSS DESIGNATION	BEARING ANGLES				WE_V	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-1911	—	—	——	——	1'-6½"	—	—	—	——	2	A242	.75	1'-11¾"	—	—	——	——	—	——	4	A242	1	.75	2'-5½"

REF. DWG	
7-AB2-1	2-15-68
7-AB2-8	2-15-68
7-AB4-15.1	10-27-67
7-AB4-16,18 & 19	1-3-68
7-AB4-28, 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

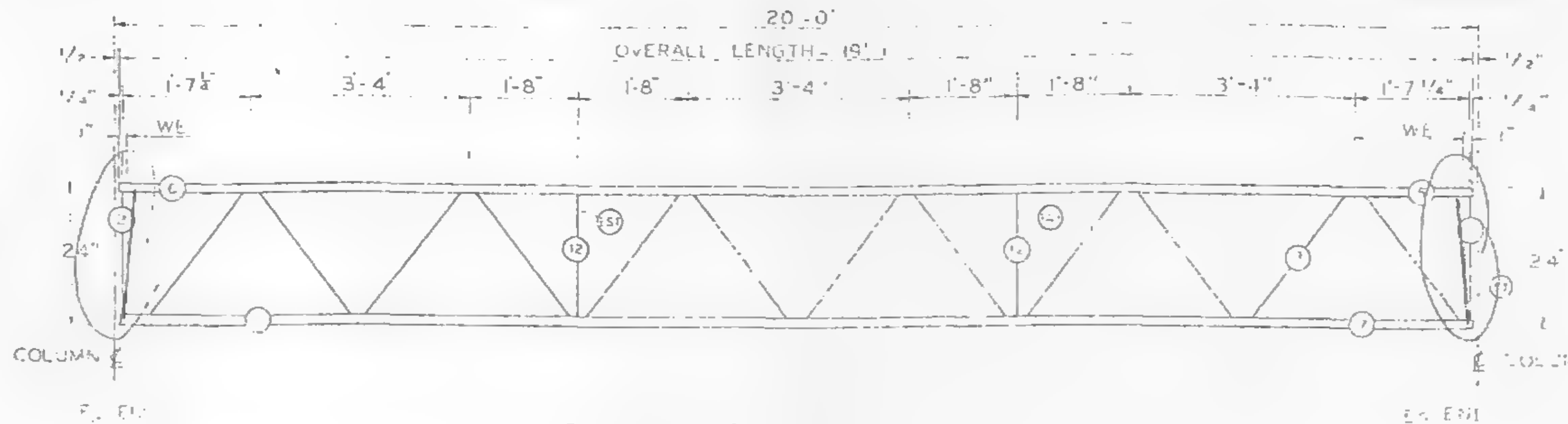
SKILLING HELLE
CHRISTIANSEN ROBERTSON
Structural & Civil Engineers

NO.	DATE	REVISION	BY
⚠1	3-19-68	WEB	J.R.P.

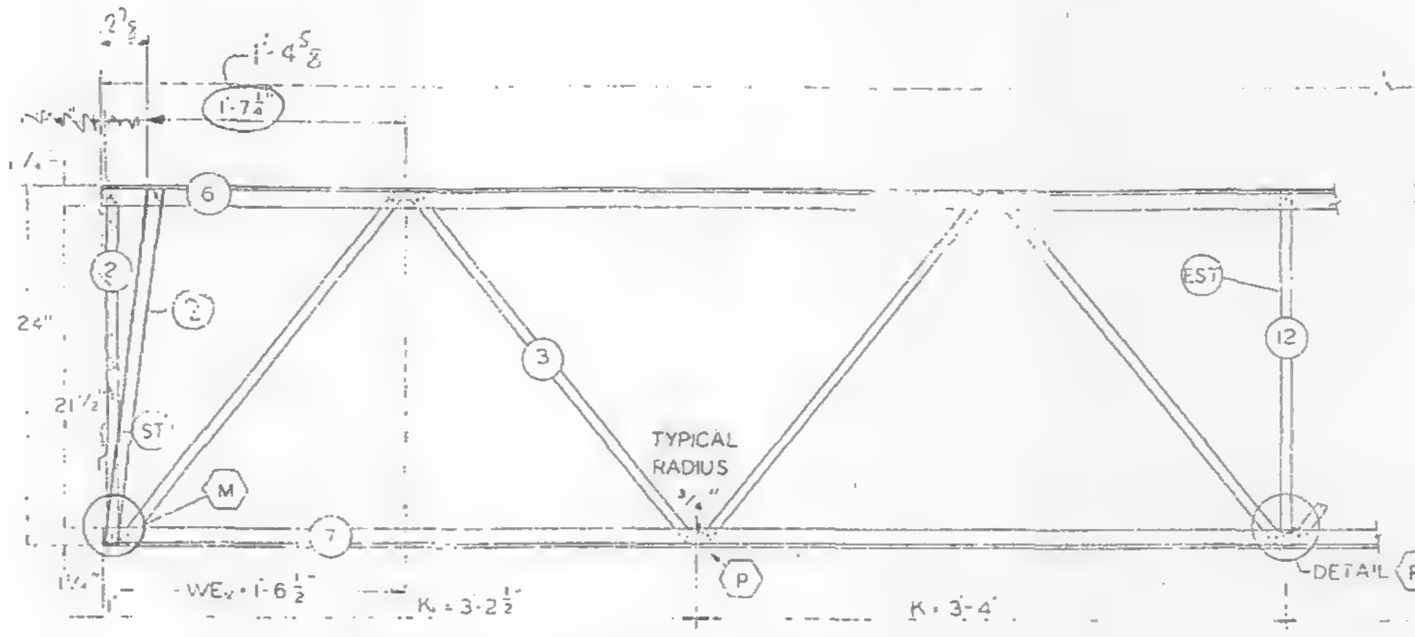
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

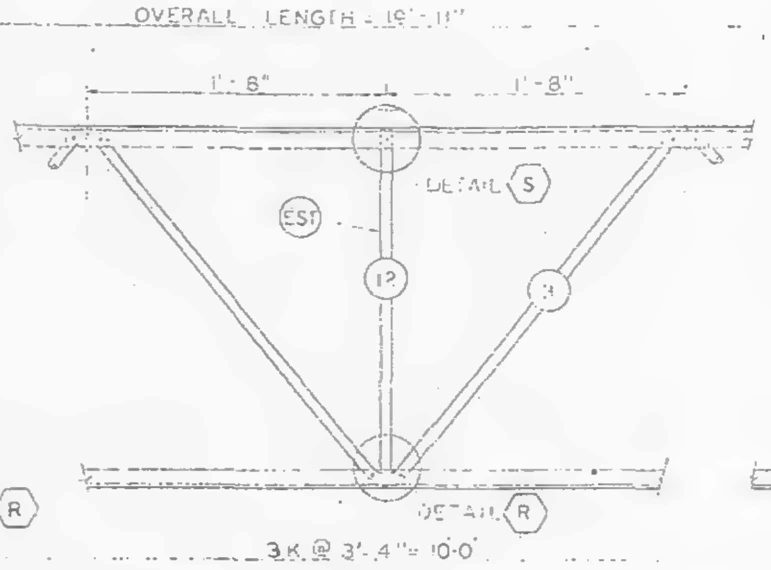
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-8
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A
DATE 4/24/68
DRAWN BY:
DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY J.R. PAUL
DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. BT211



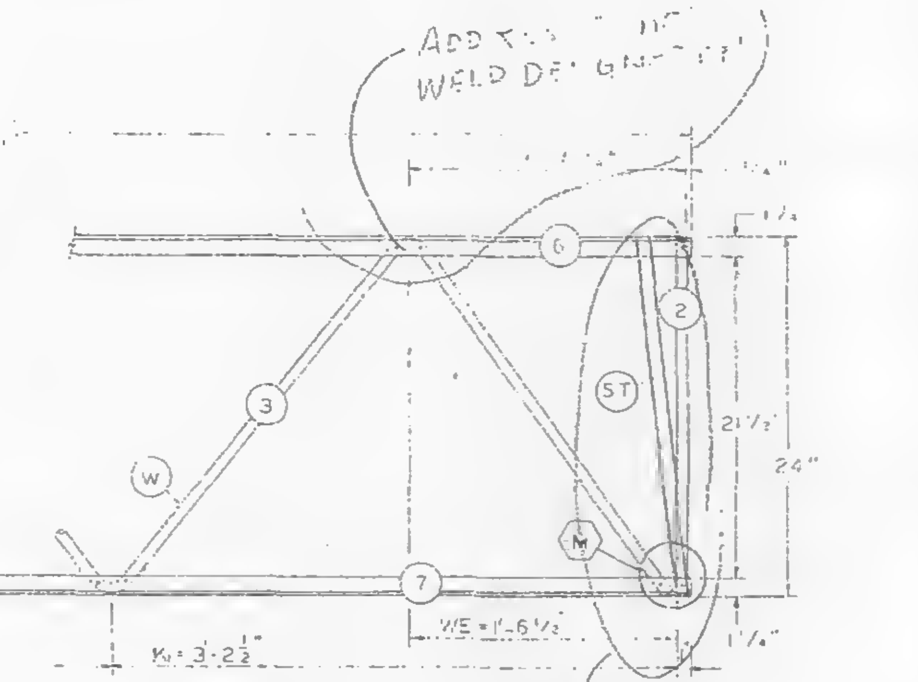
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

See left end

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ¾"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2½"	± ¼"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (IIIH)
ALL WELD DETAILS SHOWN DN SHEETS ST29D
AND ST29I.
BDXED LETTERS INDICATE WELD DETAIL, ie. ⬡A.

REF. DWG.
7-AB2-1 2-15-68
7-AB2-6 2-15-68
7-AB4-15.1 10-20-67
7-AB4-16,18 & 19 1-3-68
7-AB4-28,38 & 41 1-3-68

PAINT
LACLEDE ELECTROCDAT
RED ND 10001

TRUSS DESIGNATIDN	TOP CHORD TWO ANGLES				BDTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11 - 1911	6	A242	1½ x 1¼ x 230	19'-11"	7	A242	1½ x 1¼ x 230	19'-11"	3	A242	.75	30'-6⅜"	4 K @ 3'-4" = 13'-4" 2 K @ 3'-2½" = 6'-5"	12	A242	.75	1'-10⅞"	2				

Es END	TRUSS DESIGNATION	WE	~~VERTICAL~~ INCLINED "ST" STRUT			
			MK	TYPE STEEL	DIA	LENGTH
	24T11 - 1911	1'-6½"	2	A242	.75	1'-11¾"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED ~~VERTICAL~~ "ST" STRUT				END STIFFENER					
															MK VS			MK VS		
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH
	24T11 - 1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¼"	—	—	—	—	—	—

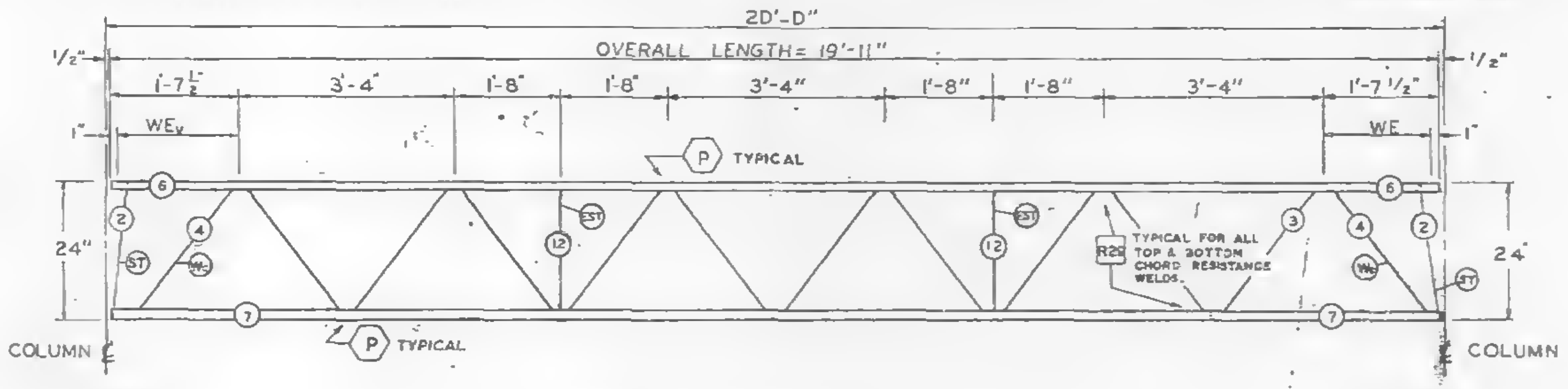
SKILLING, HELLE
CHRISTIANSEN, ROBERTSON
Structural & Civil Engineers
X
3/26/68 SK.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YDRK AUTHDRITY

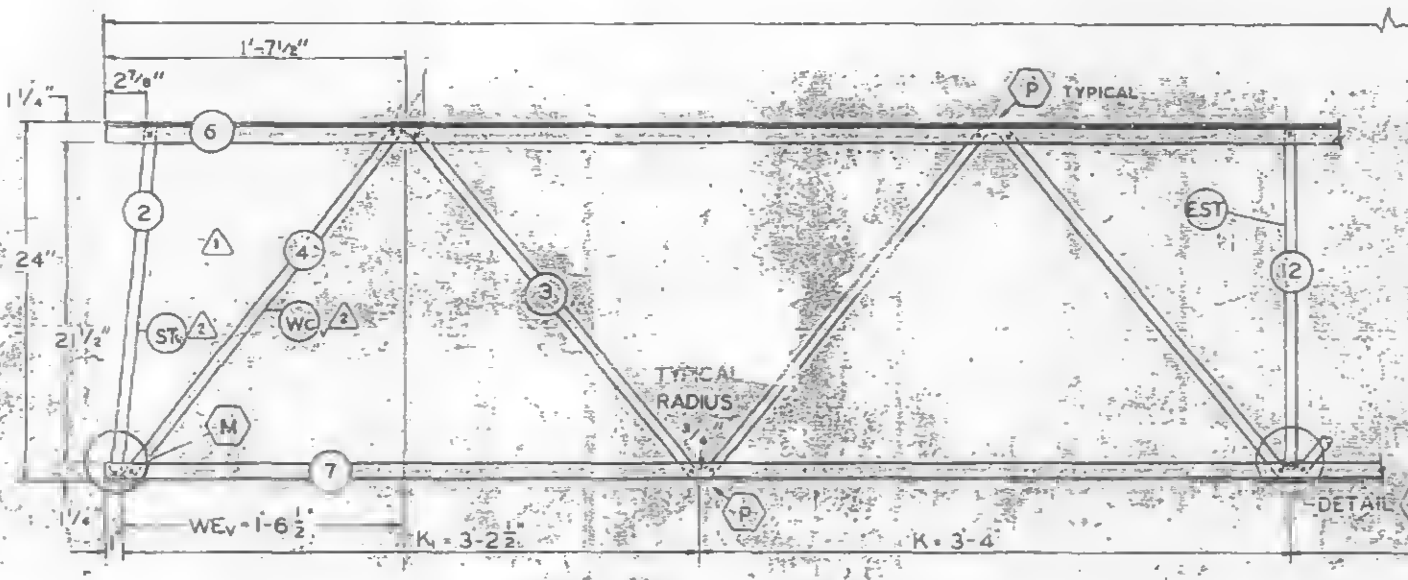
BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

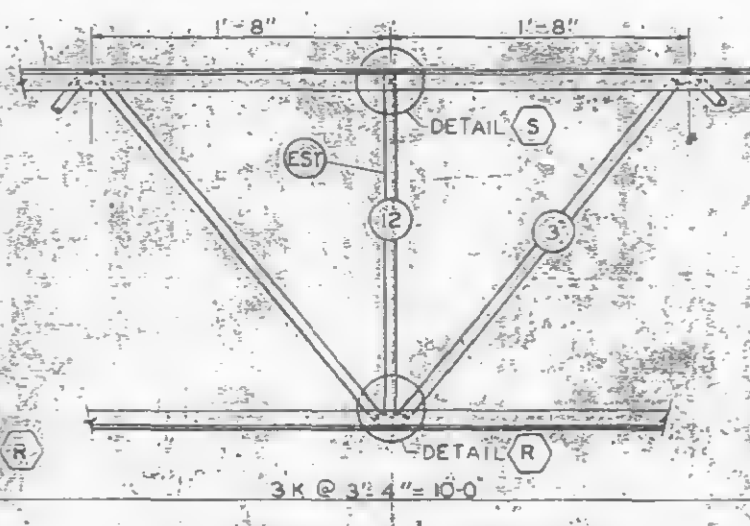
FABRICATED AT MADISDN, ILLINOIS	DESIGN DRAWING NO 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY FOR PON/A	DATE	DRAWN BY [illegible] DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB 26, 1968	IN CHARGE OF PROD DEV
LACLEDE STEEL CO. DETAILED BY A. C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO BT211



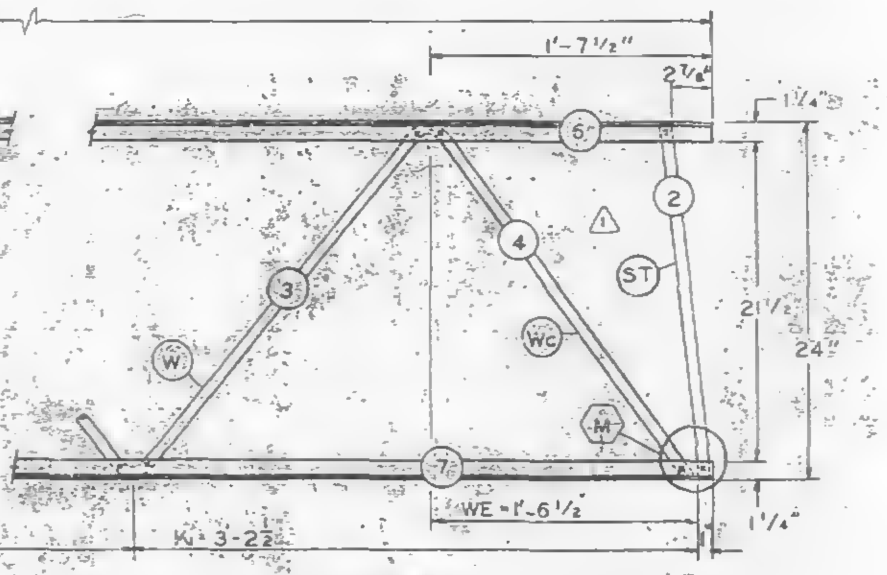
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PAN. "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. Ⓐ
△1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

△2 REF. DWG.

7-AB2-1	4-1-68
7-AB2-6	2-15-68
7-AB4-15.1	1-3-68
7-AB4-16,18	5-5-68
7-AB4-28, 19 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K.	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11 - 1911	6	A242	1½"x1¼"x.230"	19'-11"	7	A242	1½"x1¼"x.230"	19'-11"	3	A242	.75	25'-7½" △3	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞" △2	2				

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTN	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11 - 1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "STv" STRUT △2				END STIFFENER						WEB "Wc" △2				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTN		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA.	LENGTH
	24T11 - 1911	—	—	——	——	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

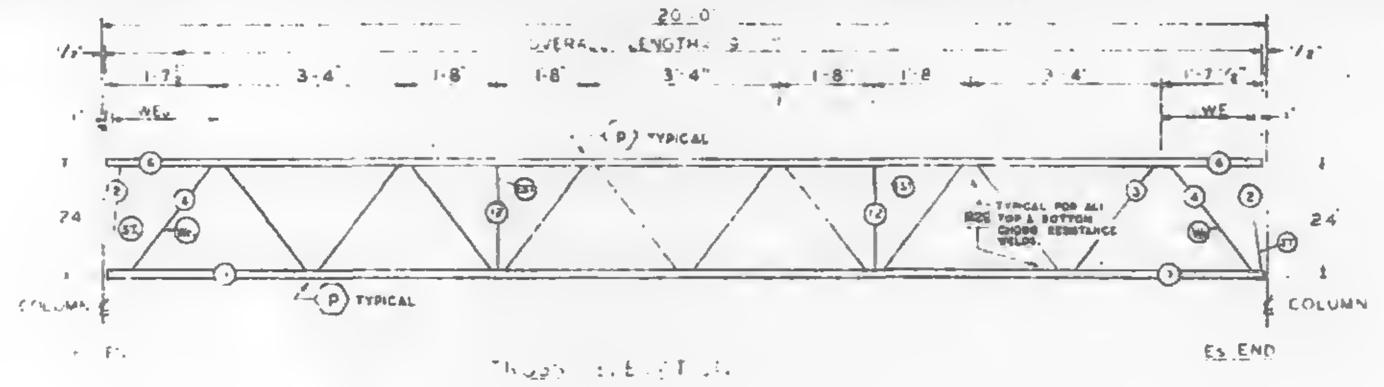
NO.	DATE	REVISION	BY
△3	7-3-68	MAIN WEB	T.H.C.
△2	6-26-68	AS NOTED	T.M.C.
△1	3-19-68	WEB	J.R.P.

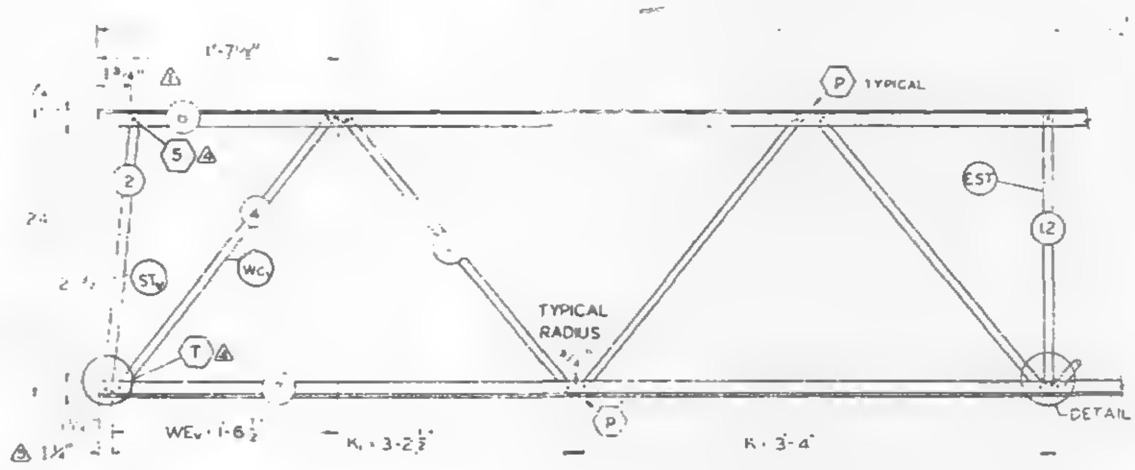
1281D

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

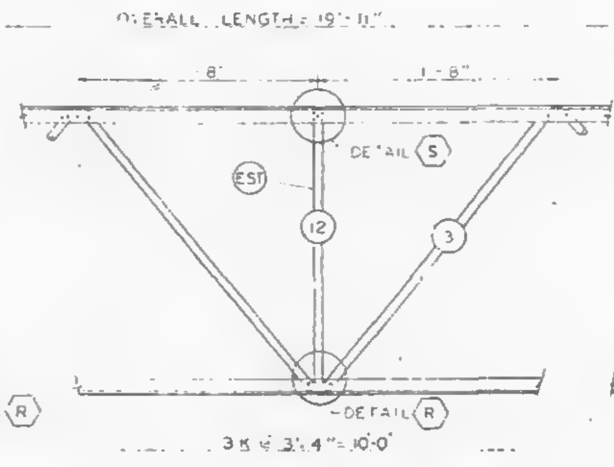
BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-6
PLATE.
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE
DRAWN BY: J. R.
DATE FEB 24, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR, DATE
CHECKED BY: J.R. PAUL
DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT211

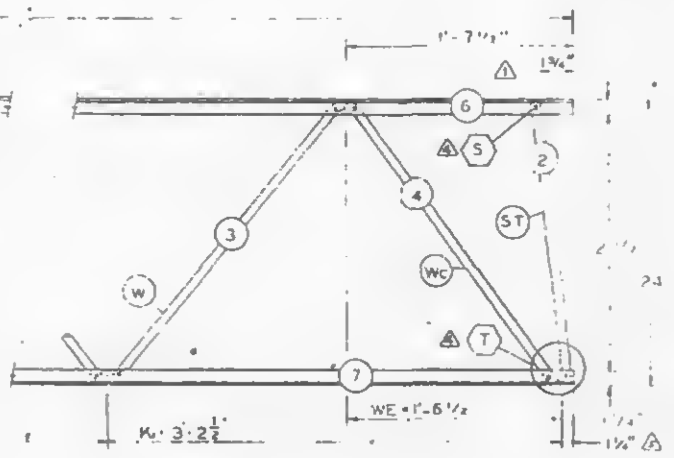




ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24"	± ¼
PANEL K	3'-4	± ¼
END K	3'-2½	± ¼
WEB DEPTH	23⅞"	± ¼
OVERALL LENGTH	19'-11"	± ⅛"

ALL PANEL POINTS RESISTANCE WELDED OR ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES ONLY. ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL. LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. R29.

REF. DWG. 7 AB4 - [illegible] 8-1-68 △

7 AB4 [illegible] 2-15-68

7 AB5 [illegible] 1-3-68 △

7 AB4 - 6, 8 5-6-68 △

7 AB4 - 8, 41 2-68 △

7 AB4 - 38 4-1-68 △

PAINT
LACLEDE [illegible]
REF. NO. [illegible]

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"						VERTICAL "EST" STRUT				TRUSS DATA	FILLER	
	MK	TYPE STEEL	[illegible]	LENGTH	MK	TYPE STEEL	[illegible]	LENGTH	MK	TYPE STEEL	[illegible]	LENGTH	[illegible]	[illegible]	MK	TYPE STEEL	[illegible]	LENGTH	[illegible]	NO.	DIA
24T11A-1911	6	A242	1"x1"x.230	19'-11"	7	A242	1"x1"x.230	19'-11"	3	A242	.5	25'-7½" △	5K	3'-4" = 6'-8"	12	A242	.75	1'-10⅞" △	2	—	—

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB WC				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6½"	2	A242	.75	1'-11⅞"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
															MK #5			MK #6							
		MK	TYPE STEEL	CHORD	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	-	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11⅞"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

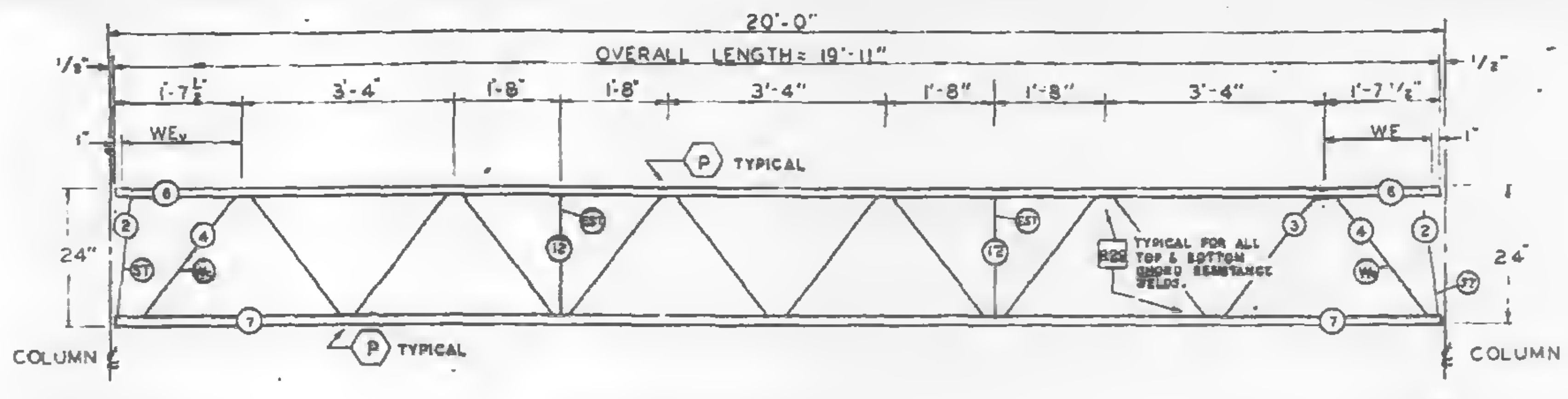
NO.	DATE	REVISION	BY
△5	7-27-68	END DIST (2)	T.M.C.
△4	7-8-68	AS NOTED	T.M.C.
△3	7-3-68	MAIN WEB	T.M.C.
△2	6-26-68	LENGTH OF "EST," REF. DWG.	T.M.C.
△1	4-25-68	END STRUT DIMENSIONS	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A × 19'-0" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

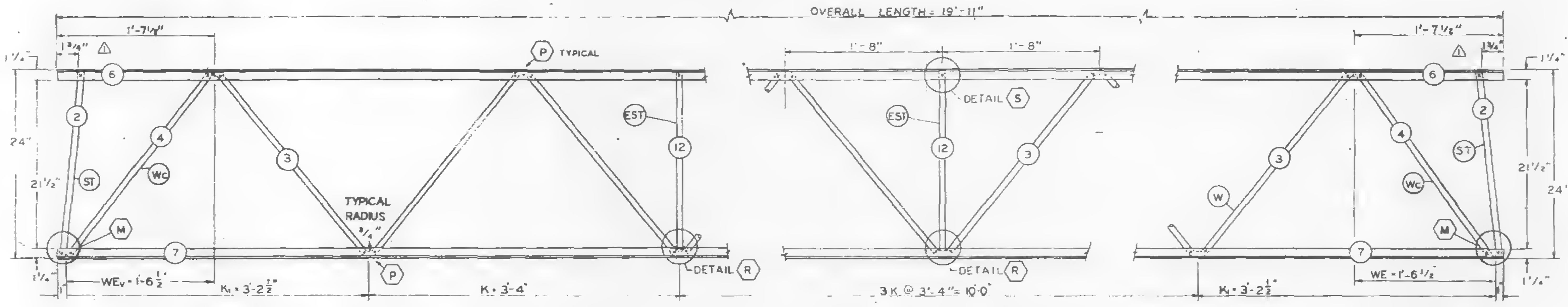
FABRICATION AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7 AB2 6	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA	DATE 8/2/68	DRAWN BY [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF PROD. [illegible]
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. 221	SHEET NO. BT211A



TRUSS ELEVATION

EL END

Es END



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., $\boxed{R29}$.

REF DWG	
7-AB2-1	2-15-68
7-AB2-6	2-15-68
7-AB4-15.1	10-27-67
7-AB4-16,18 & 19	1-3-68
7-AB4-28,38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
REO NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11A-1911	6	A242	1 1/2" x 1 1/4" x 23D	19'-11"	7	A242	1 1/2" x 1 1/4 x 23D	19'-11"	3	A242	.75	30'-6 1/2"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 1/8"	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

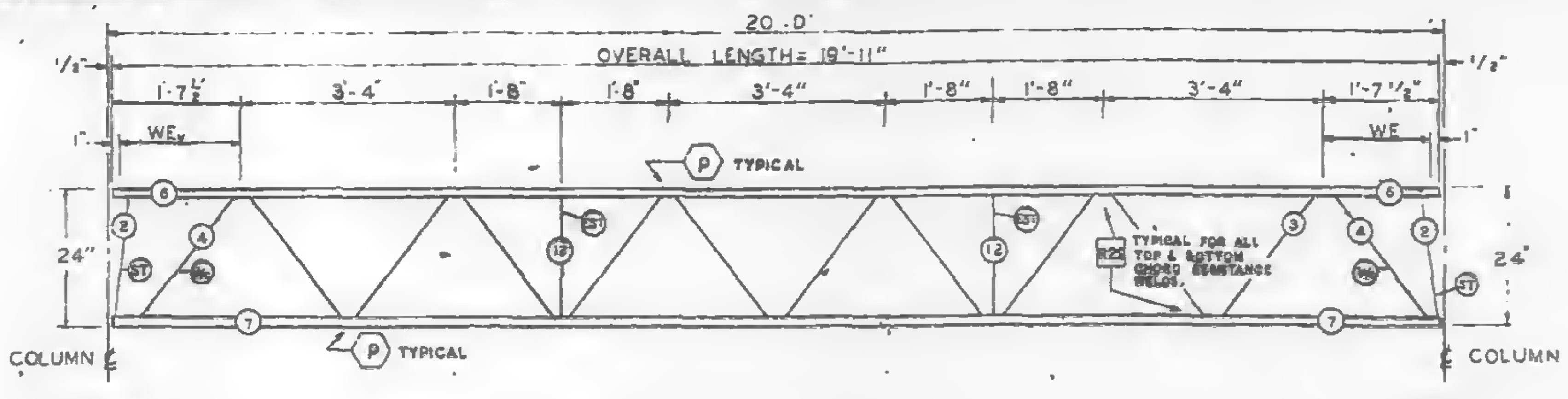
NO.	DATE	REVISION	BY
⚠1	4-25-68	END STRUT DIMENSIONS	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

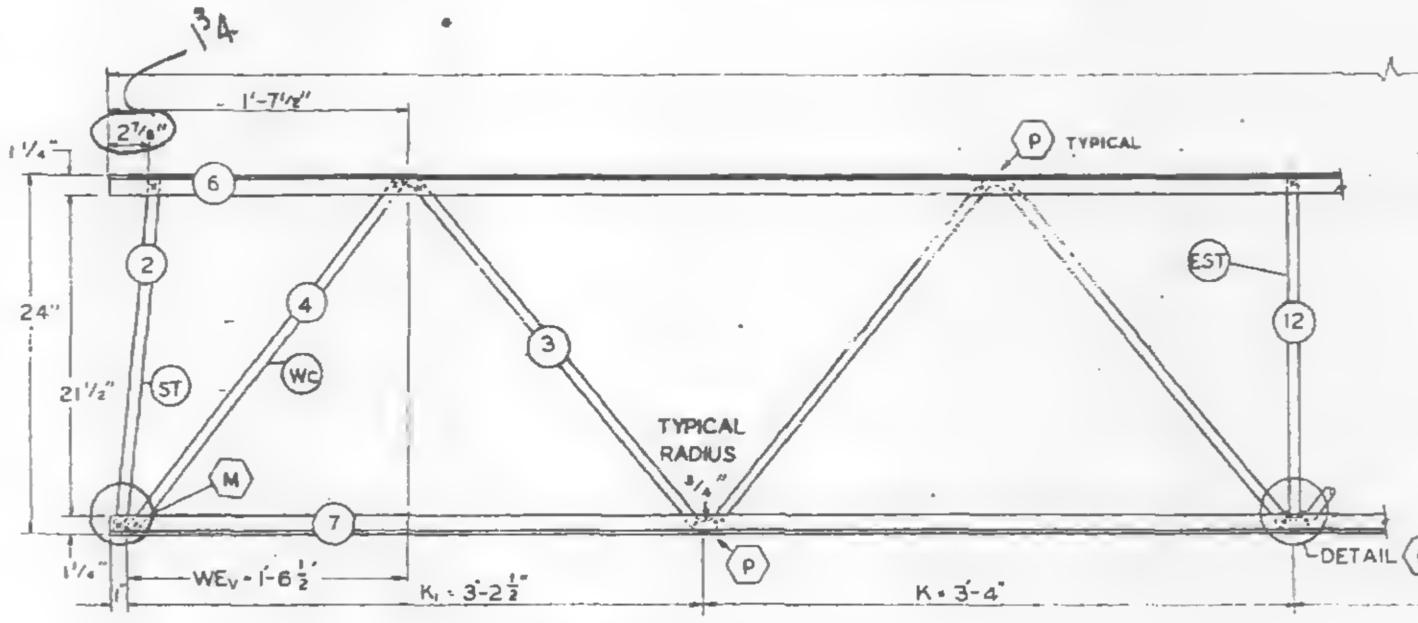
BRIDGING TRUSS 24T11A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

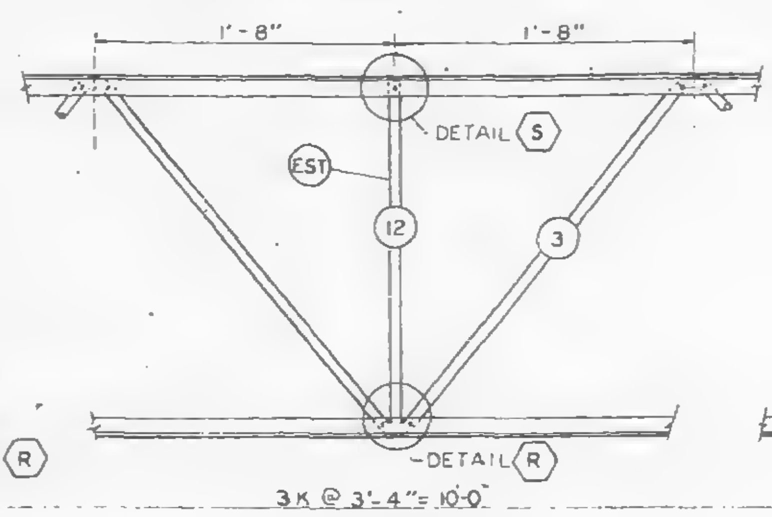
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY James White Jr. FOR P.O.N.Y.A.	DATE 5/1/68	DRAWN BY L.R. DATE FEB 24 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB 24 1968	IN CHARGE OF PROD DEV
LACLEDE STEEL CO. DETAILED BY A C WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO ST211A



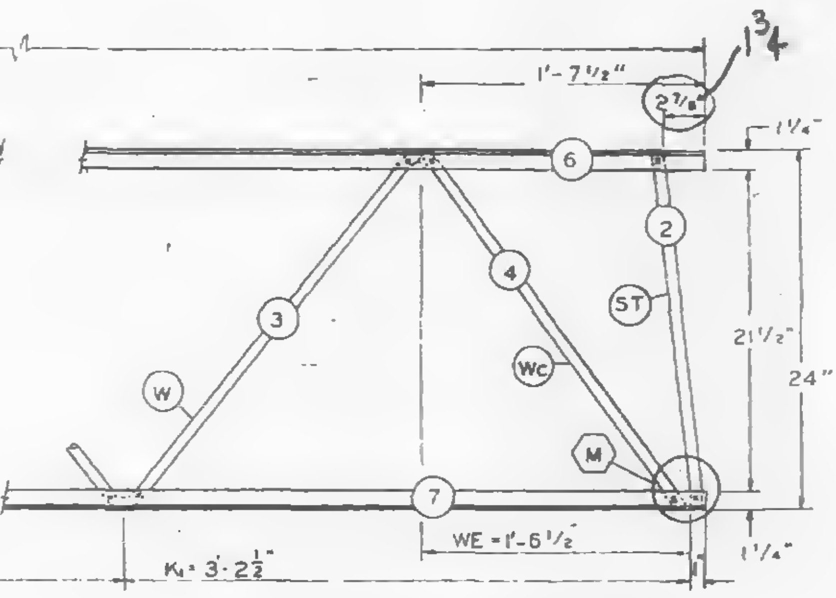
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 1/8"
DESIGN DEPTH	24"	± 1/8"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2 1/2"	± 1/8"
WEB DEPTH	23 1/2"	± 1/8"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DWG. 7-AB2-1 2-15-68
7-AB2-6 2-15-68
7-AB4-15.1 10-27-67
7-AB4-16,18 & 19 1-3-68
7-AB4-28,38 & 41 1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11A-1911	6	A242	1 1/2"x1 1/4"x.230	19'-11"	7	A242	1 1/2"x1 1/4"x.230	19'-11"	3	A242	.75	30'-6 1/2"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 1/8"	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK VS			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 1/2"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

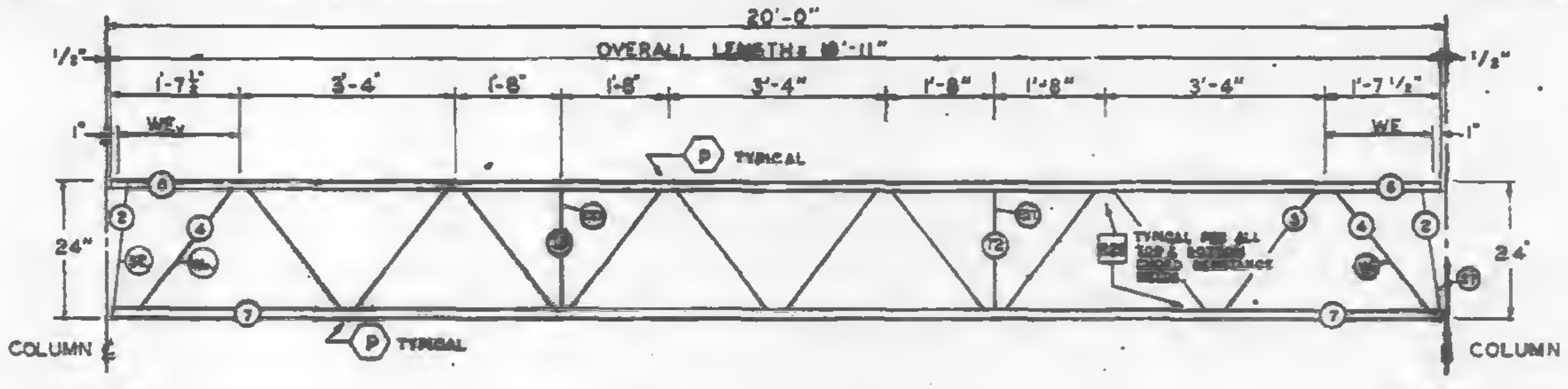
SKILLING-HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
X
4/24/68 SK

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

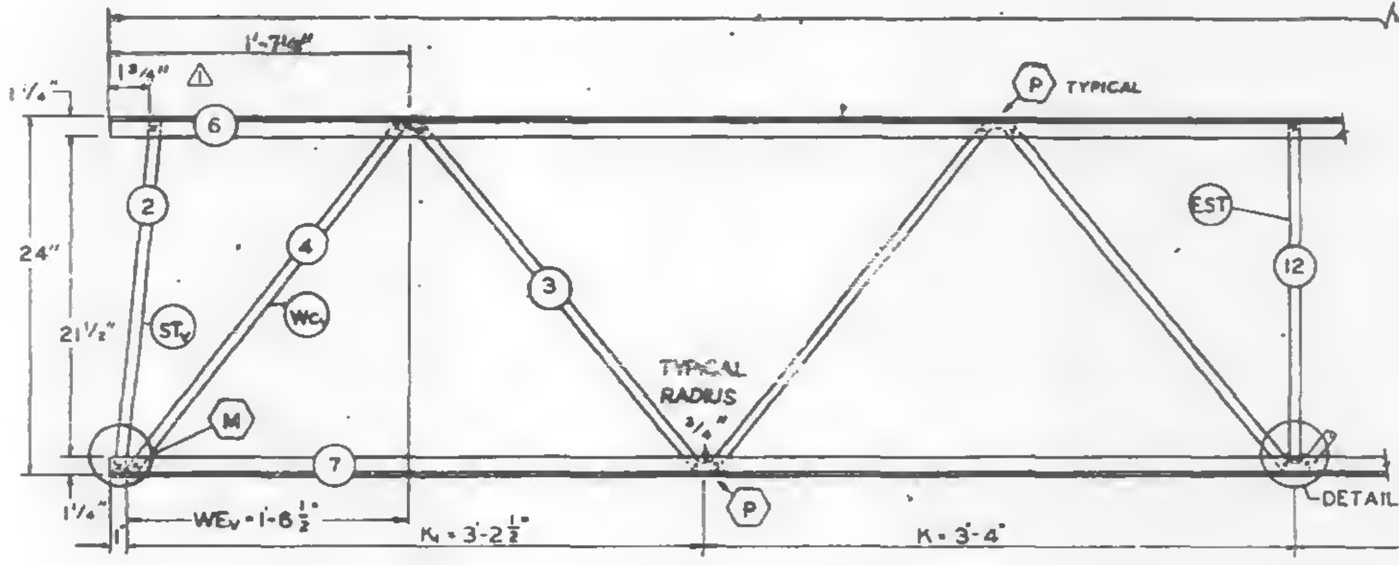
BRIDGING TRUSS 24T11A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

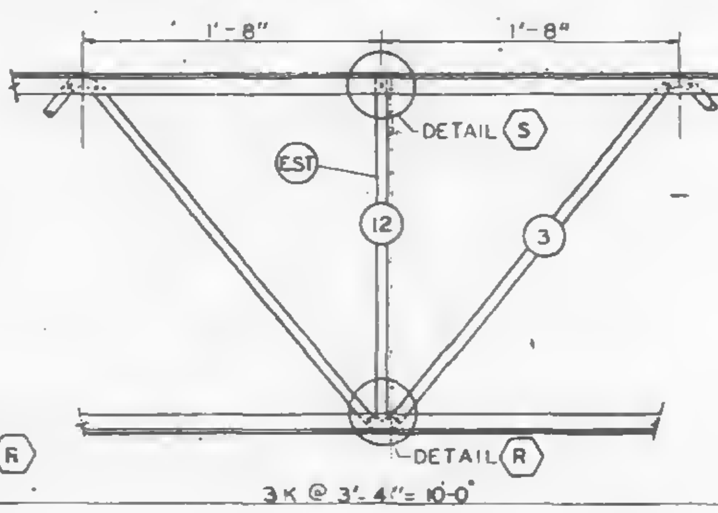
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY: L.R. DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF PROD. DEV
LACLEDE STEEL CO. DETAILED BY A C WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO BT211A



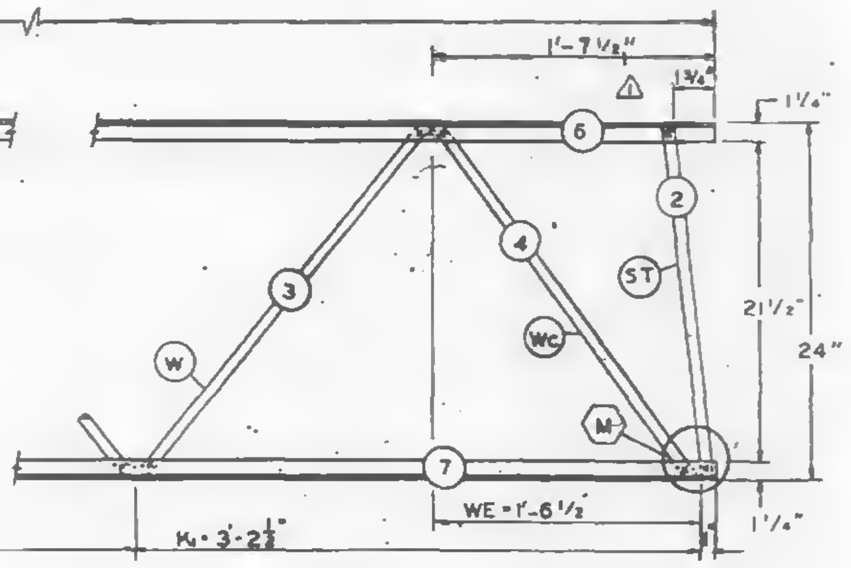
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT "ADDED STRUT"



ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2 1/2"	± 1/8"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⬡A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DWG.
7-AB2-1 4-1-68 ⚠2
7-AB2-6 2-15-68
7-AB4-15,1,18 1-3-68 ⚠2
7-AB4-18,18 5-8-68 ⚠2
7-AB4-28,41 1-3-68 ⚠2
7-AB4-38 4-1-68 ⚠2

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWD ANGLES				BOTTOM CHORD TWD ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF K.	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11A-1911	6	A242	1 1/2"x1 1/4"x.230	19'-11"	7	A242	1 1/2"x1 1/4"x.230	19'-11"	3	A242	.75	25'-7 1/2" ⚠3	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 7/8" ⚠2	2			—	—

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6 1/2"	2	A242	.75	1'-11 3/8"	4	A242	1	.75	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				INCLINED "STv" STRUT				END STIFFENER						WEB "WCv"				
															MK V5			MK V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA.	LENGTH
	24T11A-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 3/8"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

NO.	DATE	REVISION	
⚠3	[illegible]-68	MAIN WEB	T.M.C.
⚠2	6-28-68	LENGTH OF "EST" REF. DWG.	T.M.C.
⚠1	4-25-68	END STRUT DIMENSIONS	[illegible]

VOID

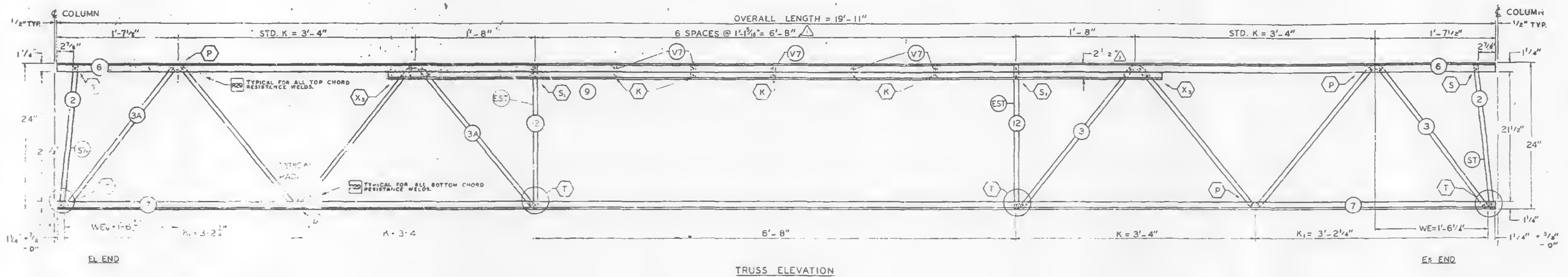
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: [illegible] DATE FEB 24, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY [illegible]		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. ST211A

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	[illegible]
DESIGN DEPTH	24"	[illegible]
PANEL "K"	3'-4"	[illegible]
PANEL "K₁"	3'-2½"	[illegible]
WEB DEPTH	23⅛"	[illegible]
OVERALL LENGTH	19-11"	[illegible]



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL i.e. Ⓟ.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. i.e. R29.

REF. DWG.	
7-AB2-[illegible]	10-4-68
7-AB2-15	10-4-68
7-AB4-15 [illegible]	10-4-68
7-AB4-5 3	7-22-68
7-AB4-28 & 41	7-22-68
7-AB4-[illegible] & 19	10-15-68

[illegible] ELECTROCOAT

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT						BEARING ANGLES				SPECIAL FILLER ⚠				
	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH		MK	TYPE STEEL	DIA	LENGTH	PCS		MK	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T11B-1911	6	A242	1½ x 1¼ x .230	19-11	7	A242	1¼ x 1¼ x .230	19-11"	3 3A	A242 A242	.75 .75	10'-1½" 10'-1½"	2K@3'-4"=6'-8" 2K@3'-4"=6'-8"	12	A242	.75	1'-11⅞"	2	—	9	A242	1½"x1¼"x.23"	10'-10"	V7	A242	.75	5	2⅜"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	1'-6¼"	2	A242	.75	1'-11⅞"	—	—	—	—	—

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE₁	DIAGONAL "T" STRUT				INCLINED "ST₁" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	—	—	—	—	—

NO.	DATE	REVISION	BY
⚠	11-12-68	SPECIAL FILLER	LWH

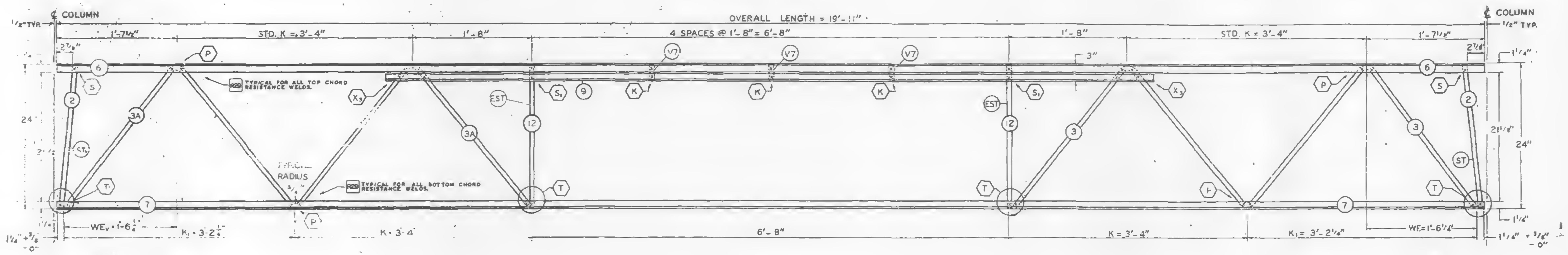
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11B x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-15	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA	DATE 11/13/68	DRAWN BY [illegible] DATE OCT. 29, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T. M. CHURA DATE OCT. 29, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A. C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. BT 211 B

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	[illegible]
DESIGN DEPTH	24"	± 1/8"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23¼"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., ⬡P.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R29.

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
X AS NOTED
11/7/68 SK

REF DWG	
7-AB2-1	10-4-68
7-AB2-15	10-4-68
7-AB4-15.1	10-4-68
7-AB4-18.18	7-22-68
7-AB4-28 & 41	7-22-68
7-AB4-38 & 19	10-15-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		BEARING ANGLES				SPECIAL FILLER				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T11B-1911	6	A242	1½"x1¼"x.230"	19'-11"	7	A242	1½"x1¼"x.230"	19'-11"	3 3A	A242 A242	.75 .75	10'-1½" 10'-1½"	2K@3'-4"=6'-8" 2K@3'-4"=6'-8"	12	A242	.75	1'-11⅞"	2			—	—	9	A242	1½"x1¼"x.23"	10'-10"	V7	A242	.75	③ 10	2⅞"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	1'-8¼"	2	A242	.75	1'-11¾"	—	—	—	—	—

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "STv" STRUT				END STIFFENER						WEB "WC"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	—	—	—	—	—

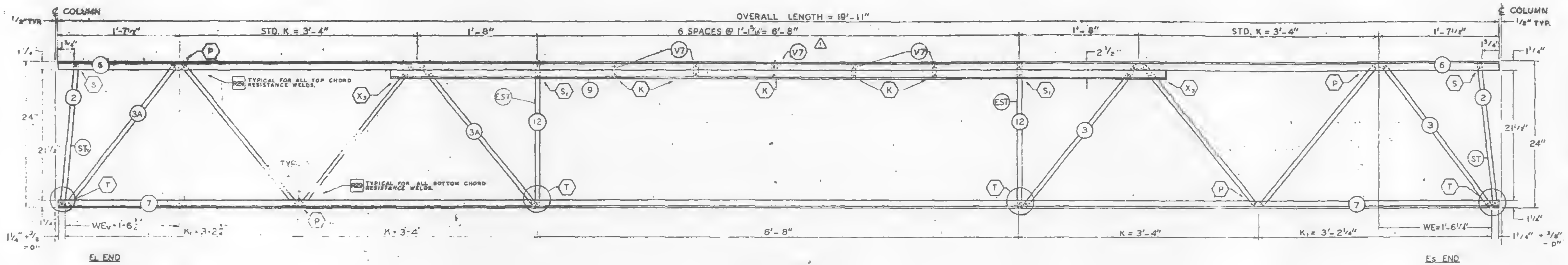
NO	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11B x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-15 PLATE
APPROVED FOR FABRICATION BY ______ FOR PONYA DATE
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
DRAWN BY: L.J. DATE OCT. 29, 1968
CHECKED BY T. M. CHURA DATE OCT. 29, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY LACLEDE STEEL CO.
FABRICATION CONT. NO. WT 221
SHEET NO. BT 211 B

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24	± ⅛"
PANEL "K"	3'-4"	± ⅛"
PANEL "K₁"	3'-2½"	± ⅛"
WEB DEPTH	23¾"	± ⅛
OVERALL LENGTH	19'-11"	± ⅛



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie.,(P).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R29.

REF DWG		
	7-AB2-1	10-4-68
	7-AB2-15	10-4-68
	7-AB4-15.1	10-4-68
	7-AB4-16.19	7-22-68
	7-AB4-28 & 41	7-22-68
	7-AB4-18 & 19	10-15-68

PAINT
LACLEDE ELECTROCOAT
REF NO 10301

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	FILLER		BEARING ANGLES				SPECIAL FILLER ⚠1				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO. OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA.	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T11C - 1911	6	A242	1½"x1¼"x 230	19'-11"	7	A242	1½"x1¼"x 230	19'-11"	3 3A	A242 A242	.75 .75	10'-1½" 10'-1½"	2K@3'-4"=6'-8" 2K@3'-4"=6'-8"	12	A242	.75	1'-11⅞"	2		—	—	9	A242	1½"x1¼"x.23"	10'-10"	V7	A242	.75	9	2⅜"

E₂ END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11C - 1911	1'-5¼"	2	A242	.75	1'-11⅞"	—	—	—	—	—

E₁ END	TRUSS DESIGNATION	BEARING ANGLES				WE₁	DIAGONAL "ST" STRUT				INCLINED "ST" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11C-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11⅞"	—	—	—	—	—	—	—	—	—	—	—

NO.	DATE	REVISION	BY
⚠1	11-12-68	SPECIAL FILLERS	LWH

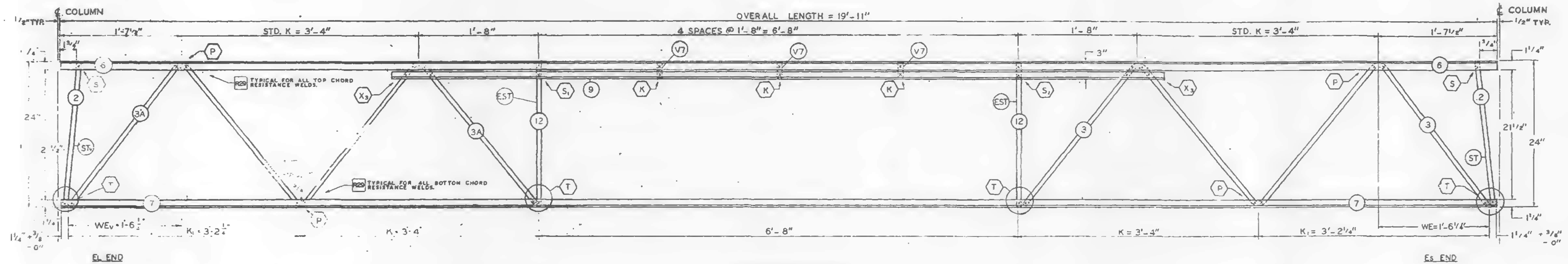
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11C x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-15	PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A.	DATE 11/18/68	DRAWN BY [illegible] DATE OCT. 29, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHURE DATE OCT 29, 1968	IN CHARGE OF PROD. DIV.
DETAILED BY LACLEDE STEEL CO.		FABRICATION CONT NO. W.T.C. 221	SHEET NO. BT 2H C

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	−⅛
DESIGN DEPTH	24"	± ¼
PANEL "K"	3'-4"	± ¼
[illegible] "K1"	3'-2½"	± ¼
WEB DEPTH	23½"	± ¼
OVERALL LENGTH	19'-11"	[illegible]



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST 29D, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., ⟨P⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R29.

REF DWG		
	7-AB2-1	10-4-68
	7-AB2-15	10-4-68
	7-AB4-15	10-4-68
	7-AB4-16-9	7-22-68
	7-AB4-29 & 41	7-22-68
	7-AB4-18 & 19	10-15-68

SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
☐ CHECKED
☒ APPROVED AS NOTED
☐ REJECTED
☐ REVISED
Date 1/7/69 By SK

[illegible]
LACLEDE [illegible] CORRECT AT
RED AND [illegible]

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		BEARING ANGLES				SPECIAL FILLER				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T11C-1911	6	A242	1½"x1¼"x.230	19'-11"	7	A242	1½"x1¼x.230	19'-11"	3	A242	.75	10'-1½"	2K@3'-4"=6'-8"	12	A242	.75	1'-11⅞"	2			—	—	9	A242	1½"x1¼"x.23"	10'-10"	V7	A242	.75	3	2⅞"
									3A	A242	.75	10'-1½"	2K@3'-4"=6'-8"																		

10

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11C-1911	1'-6¼"	2	A242	.75	1'-11¾"	—	—	—	—	—

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "STv" STRUT				END STIFFENER						WEB "WC"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11C-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11[illegible]	—	—	—	—	—	—	—	—	—	—	—

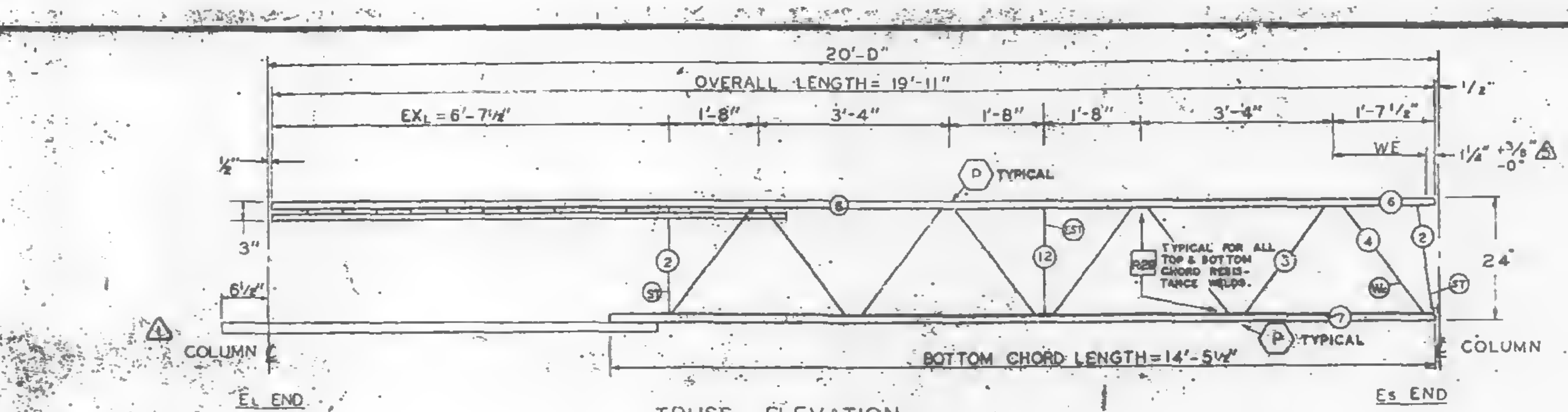
NO	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

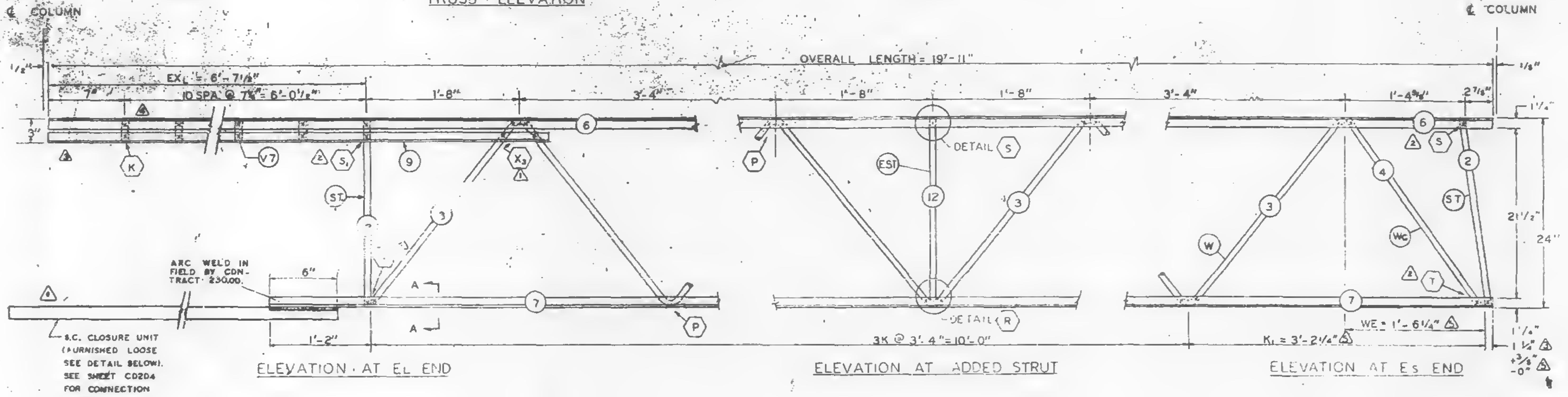
BRIDGING TRUSS 24T11C x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-15	PLATE
APPROVED FOR FABRICATION BY ________ FOR PONYA	DATE	DRAWN BY L.Y.R. DATE OCT. 29, 1968	
APPROVED FOR FABRICATION BY ________ FOR FABRICATOR	DATE	CHECKED BY T. M. CHURA DATE OCT. 29, 1968	IN CHARGE OF PROD. - DEY
LACLEDE STEEL CO. DETAILED BY A. C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. BT 211-C



TRUSS ELEVATION



ELEVATION AT E$_L$ END

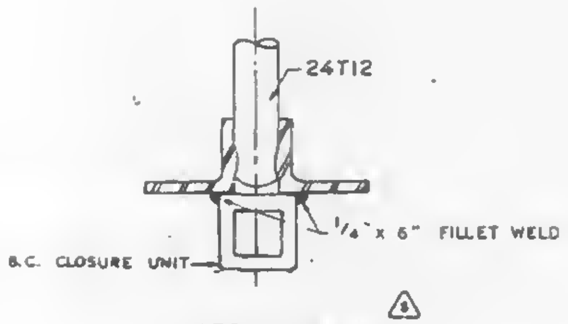
ELEVATION AT ADDED STRUT

ELEVATION AT E$_S$ END

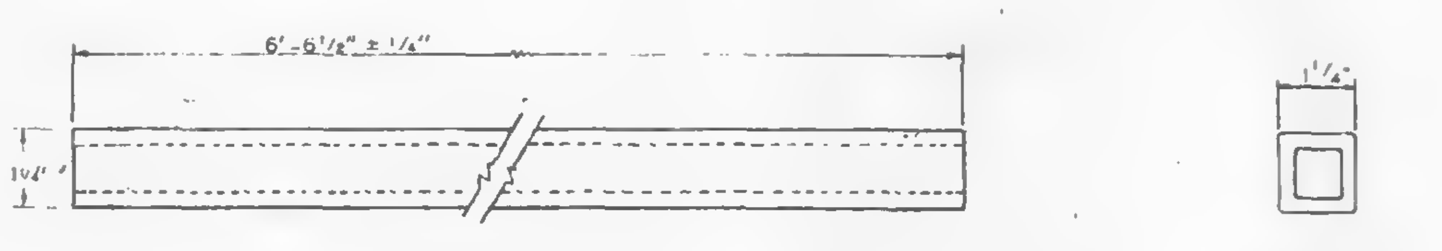
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	[illegible]
DESIGN DEPTH	24"	[illegible]
PANEL "K"	3'-4"	[illegible]
PANEL "K$_1$"	3'-2 1/2"	2 1/4"
WEB DEPTH	23 1/2"	± 1/4
OVERALL LENGTH	19'-11"	[illegible]

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE UNIT DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A ⑥



ELEVATION

END VIEW

⑥ B.C. CLOSURE UNIT

REF. DWG. 7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15.1 1-3-68
7-AB4-16 & 18 8-8-67
7-AB6-10, 20 & 41 1-3-68
7-AB4-38 4-1-67

PAINT
LACLEDE ELECTROCOAT
REQ NO 10001

MATERIAL LIST FOR B.C. CLOSURE UNIT			
PCS.	TYPE STEEL	SIZE	LENGTH
1	A242	1 1/4" x .187 WALL SQ TUBING	6'-6 1/2"

⑦

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1 1/2"x1 1/4"x.230	19'-11"	7	A242	1 1/8"x1 1/4"x.230	14'-5 1/2"	3	A242	.75	17'-11 1/4"	3 1/2K @ 3'-4" = 11'-8"	12	A242	.75	1'-10 7/8"	1		

E$_S$ END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
		⑤	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6 1/4"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/2"

E$_L$ END	TRUSS DESIGNATION	BEARING ANGLES				EX$_L$	DIAGONAL "T" STRUT				VERTICAL "ST$_1$" STRUT				END STIFFENER MK V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/2"x1 1/4"x.230	8'-8"	6'-7 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/8"	10

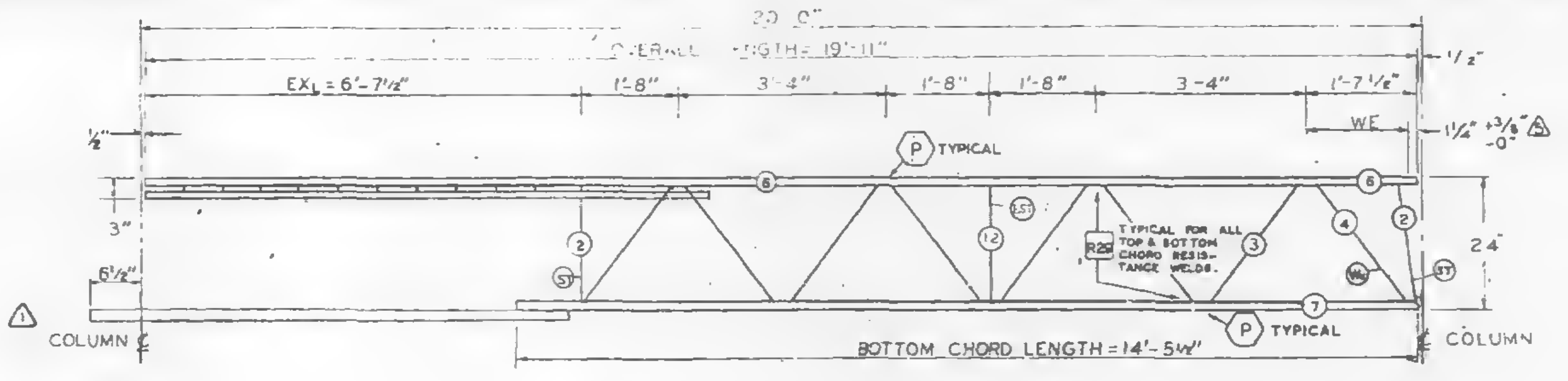
NO.	DATE	REVISION	BY
⑦	12-4-68	CLOSURE UNIT	G.D.C.
⑥	11-13-68	CLOSURE UNIT	L.W.H.
⑤	9-9-68	END DIST ②	
④	8-3-68	E$_L$ END	G.D.C.
③	7-27-68	E$_S$ & E$_L$ END	T.M.C.
②	7-8-68	AS NOTED	T.M.C.
①	6-28-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

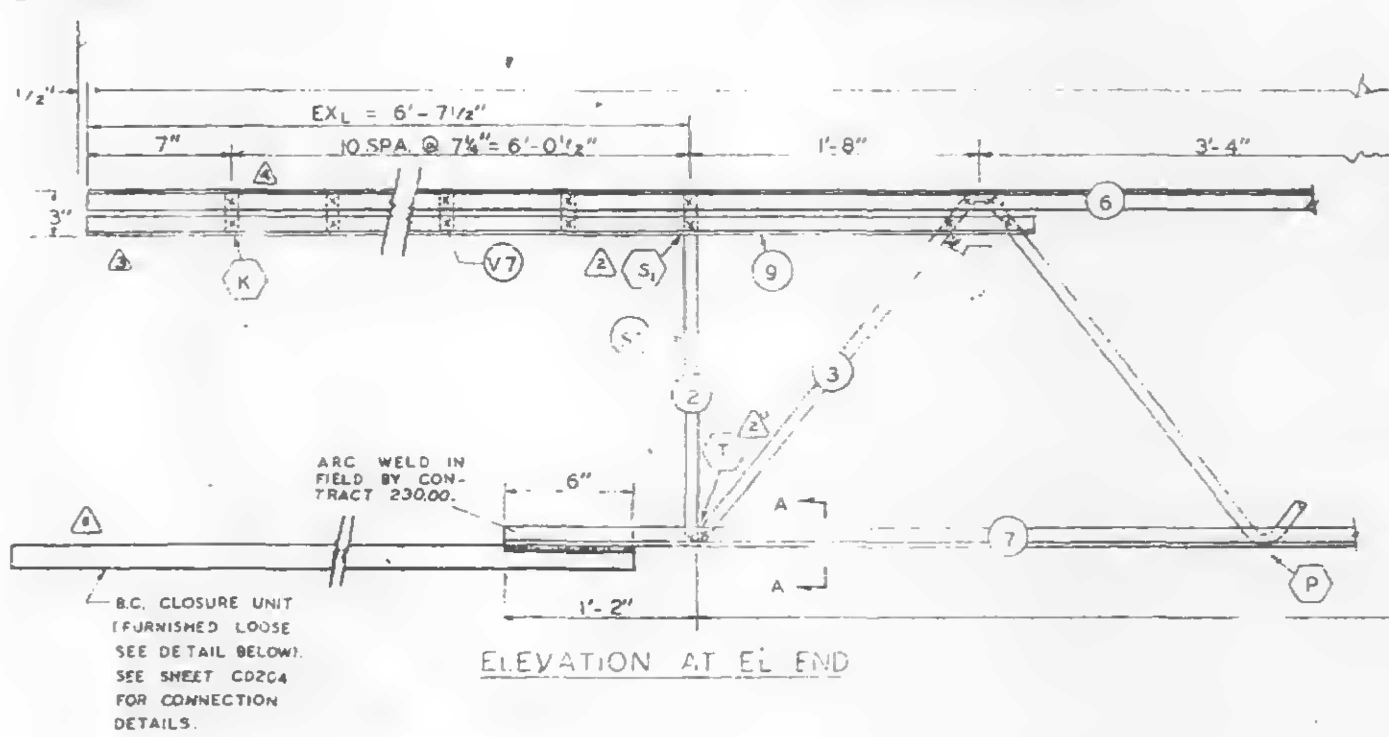
BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-2	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 12/11/68	DRAWN BY: [illegible] DATE: FEB. 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: FEB. 24, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. C. WEBB		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT212



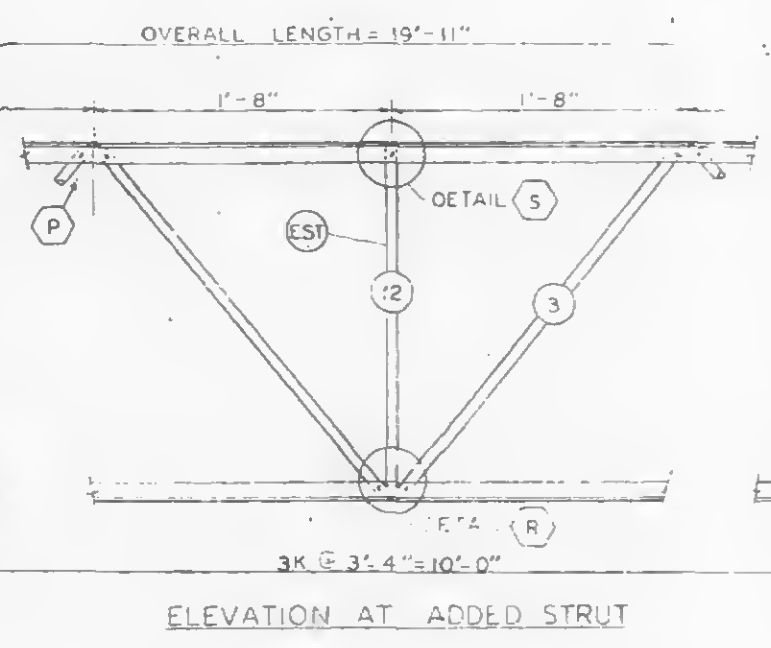
TRUSS ELEVATION



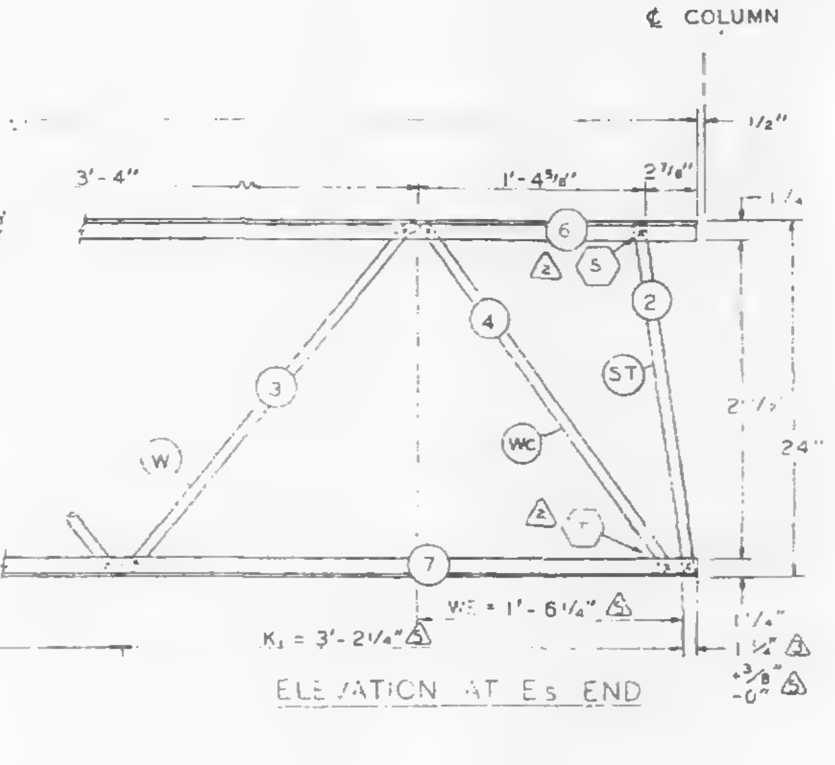
ARC WELD IN FIELD BY CONTRACT 230.00.

B.C. CLOSURE UNIT (FURNISHED LOOSE SEE DETAIL BELOW). SEE SHEET CD204 FOR CONNECTION DETAILS.

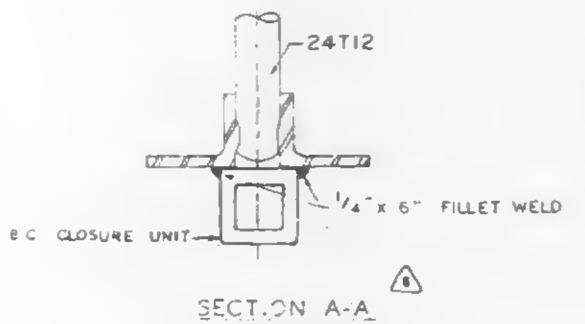
ELEVATION AT EL END



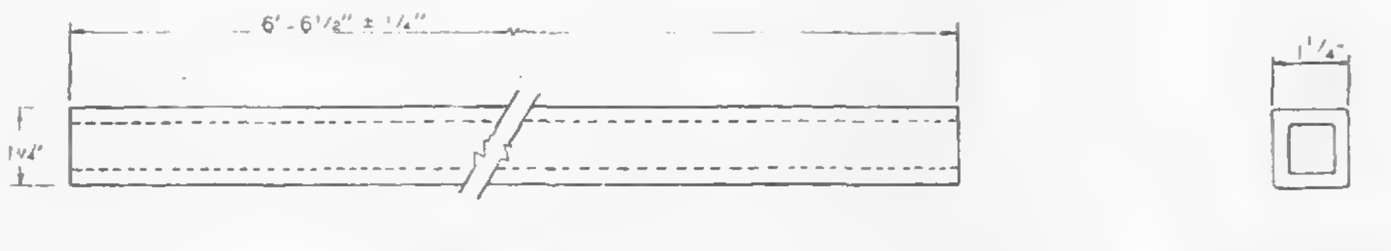
ELEVATION AT ADDED STRUT



ELEVATION AT Es END



SECTION A-A 6



ELEVATION

END VIEW

B.C. CLOSURE UNIT 6

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE.
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES ( )
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE UNIT DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.

REF. DWG	
7-AB2-1	4-1-68
7-AB2-7	2-15-68
7-AB4-15.1	1-3-68
7-AB4-16 & 18	5-6-68
7-AB4-19, 28 & 41	1-3-68
7-AB4-38	4-1-68

MATERIAL LIST FOR B.C. CLOSURE UNIT 6

PCS.	SIZE	LENGTH	Type St
~~2~~ 1	1¼" x .187 WALL SQ TUBING	6'-6½"	A242

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1½"x1¼"x.23	[illegible]	7	A242	1½"x1¼"x.230"	14'-5½"	3	A242	.75	17'-11¼"	3½K @ 3'-4" = 11'-8"	12	A242	.75	1'-10⅞"	1		

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
		5	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6¼"	2	A242	.75	1'-11¾"	4	A242	.75	1	2' 5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST1" STRUT				END STIFFENER			
															MK V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1½"x1¼"x.230"	8'-8"	6'-7½"	—	---	—	——	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

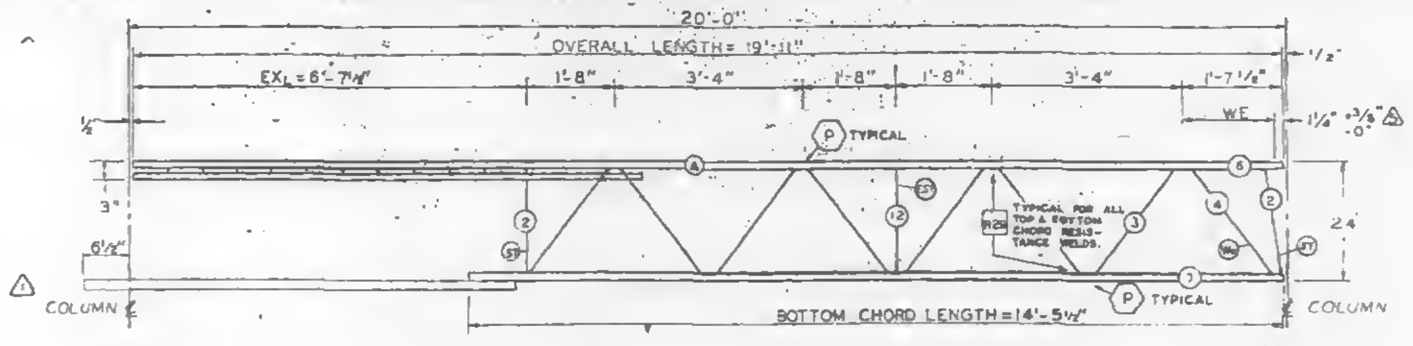
SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
12/3/68 SK

NO.	DATE	REVISION	BY
6	11-13-68	CLOSURE UNIT	L.W.N
5	9-9-68	END DIST. ②	T.M.C.
4	9-3-68	EL END	G.D.C.
3	7-27-68	Es & EL END	T.M.C.
2	7-8-68	AS NOTED	T.M.C.
1	6-26-68	FILLER SIZE. BOTTOM CHORD LENGTH	T.M.C.

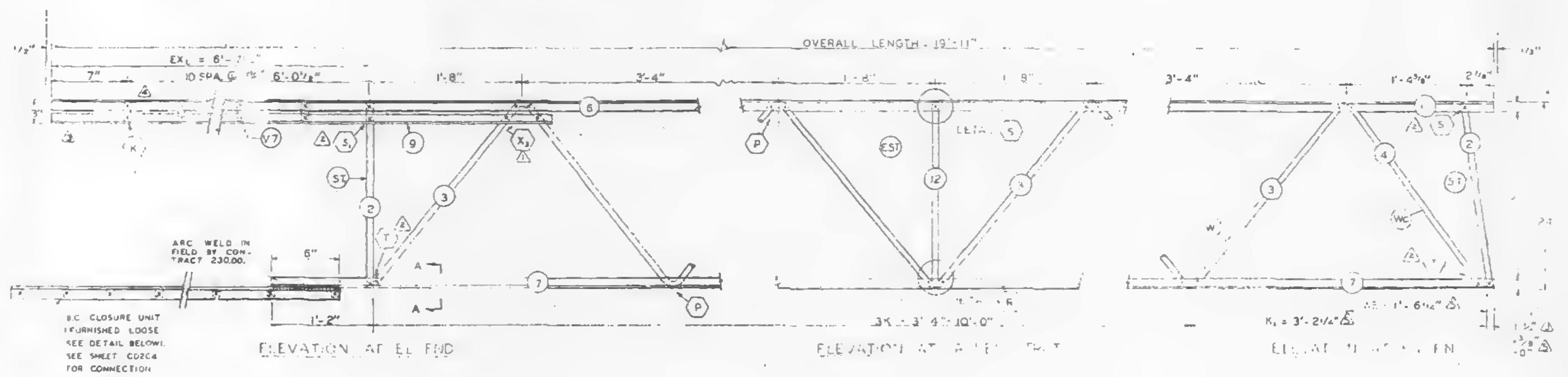
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO: 7-AB2-7
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE
DRAWN BY: G.E.B.
DATE FEB. 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: J.R. PAUL
DATE 8.24.1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT212



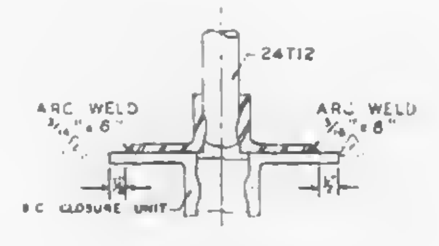
TRUSS ELEVATION


COLUMN
COLUMN
OVERALL LENGTH - 19'-11"
EX_L = 6'-7½"
7"
10 SPA @ 7¼" 6'-0½"
1'-8"
3'-4"
1'-8"
1'-8"
3'-4"
1'-4⅞"
2¼"
ARC WELD IN FIELD BY CONTRACT 230.00.
6"
1'-2"
A
A
K_1 = 3'-2½"
B.C. CLOSURE UNIT (FURNISHED LOOSE SEE DETAIL BELOW). SEE SHEET CD2D4 FOR CONNECTION DETAILS

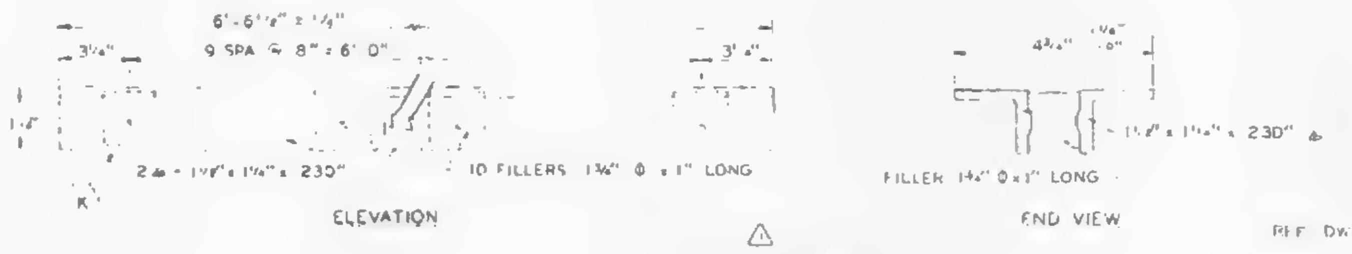
ELEVATION AT EL END

ELEVATION AT ...

ELEVATION AT ES END



SECTION A-A



B.C. CLOSURE UNIT

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K_1"	3'-2½"	± ¼"
WEB DEPTH	23⅛"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (X)
ALL WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (mm)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD2D4 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DWG 7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15-1 1-3-68
7-AB4-16 & 18 5-8-68
7-AB4-19, 20 & 41 1-3-68
7-AB4-30 4-1-68

PAINT
LACLEDE ELECTROCOAT
REF. NO. 10001

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1½"x1¼"x.23" ∠	6'-6⅞"
10	1¾" Ø FILLERS	1"

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1½"x1¼"x.230"	19'-11"	7	A242	1½"x1¼"x.230"	14'-5½"	3	A242	.75	17'-11½"	3½K @ 3'-4" = 11'-8"	12	A242	.75	1'-10⅞"	1		

E_S END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
		△5	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6¼"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5½"

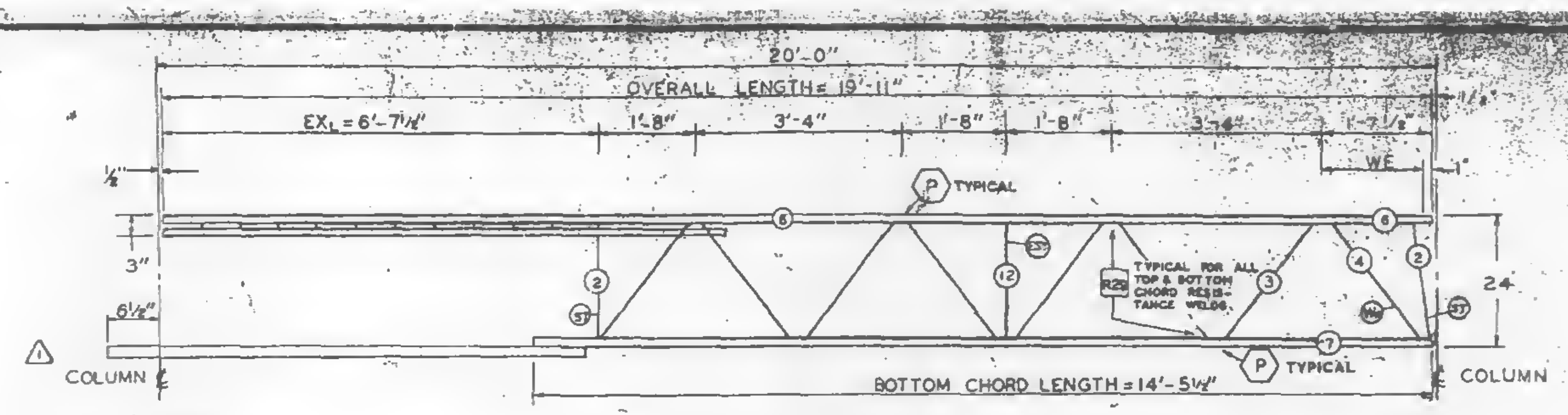
E_L END	TRUSS DESIGNATION	BEARING ANGLES				EX_L	DIAGONAL "T" STRUT				VERTICAL "ST_L" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH "L"		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1½"x1¼"x.230"	8'-8"	6'-7½"	—	—	—	—	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

NO.	DATE	REVISION	BY
△5	9-9-68	END DIST ②	T.M.C.
△4	8-3-68	E_L END	G.D.C.
△3	7-27-68	E_S & E_L END	T.M.C.
△2	7-8-68	AS NOTED	T.M.C.
△1	6-28-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

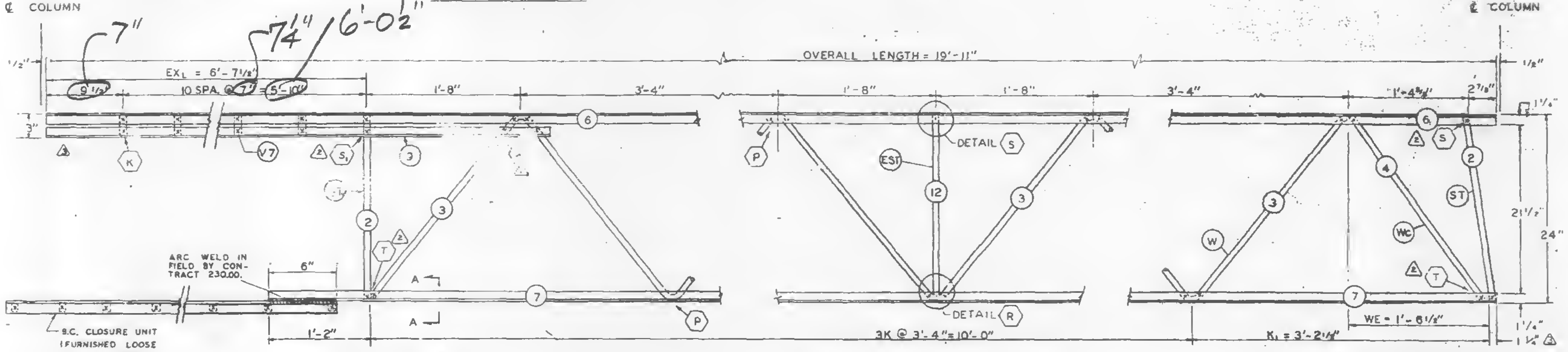
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-7 PLATE
APPROVED FOR FABRICATION AC FOR PONYA DATE 9/10/68
DRAWN BY DATE FEB. 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY J.R. PAUL DATE FEB. 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A. C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO BT212



TRUSS ELEVATION



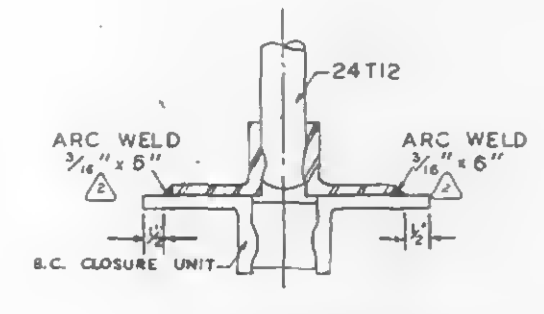
ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT ES END

FABRICATION REQUIRMENTS

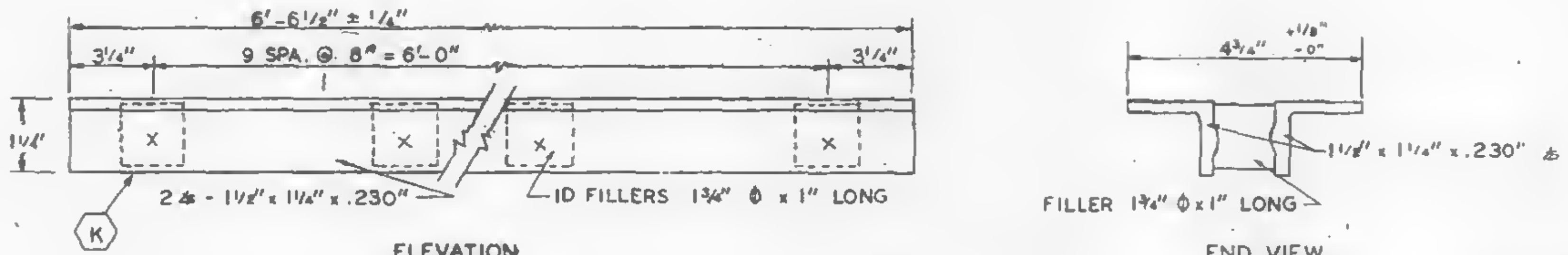
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'4"	± ¼"
PANEL "K1"	3'-2⅛"	± ¼"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (x)
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▮▮▮)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD2D4 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A



ELEVATION

END VIEW

B.C. CLOSURE UNIT

REF. DWG.
7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15.1 1-3-68
7-AB4-16 & 18 5-8-68
7-AB4-19, 28 & 41 1-3-68
7-AB4-38 4-1-68

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1½"x1¼"x.23" ∠s	6'-6½"
10	1¾" ⌀ FILLERS	1"

PAINT
LACLEDE ELECTROCOAT
REQ NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO OF K	MK	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1½"x1¼"x.230"	19'-11"	7	A242	1½"x1¼"x.230"	14'-5½"	3	A242	.75	17'-11¼"	3½K @ 3'-4" = 11'-8"	12	A242	.75	1'-10⅞"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST1" STRUT				END STIFFENER MK V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH "T"		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1½"x1¼"x.230"	8'-8"	6'-7½"	—	—	—	—	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

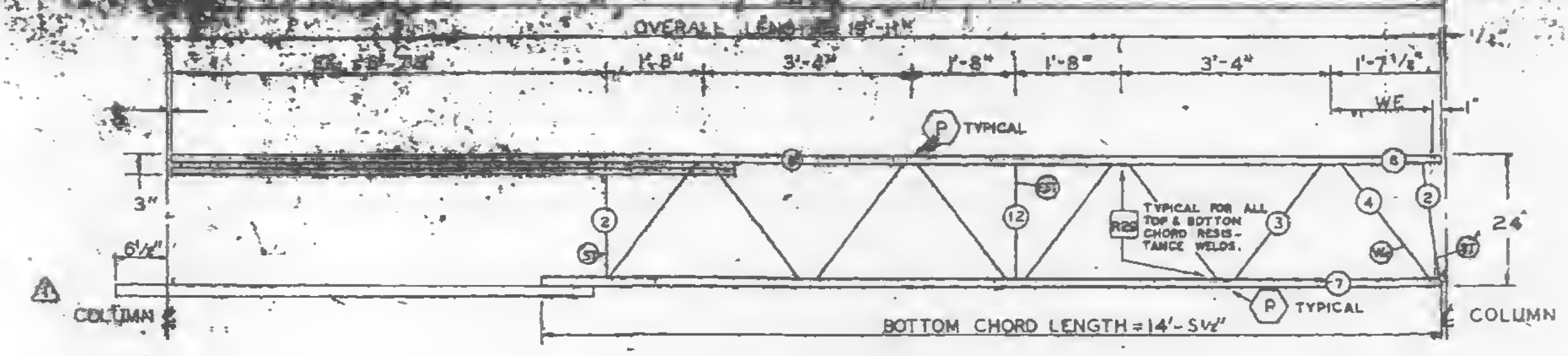
SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☐ APPROVED AS NOTED
☒ RESUBMIT
☐ REJECTED
Date 8/29/68 By SK

NO.	DATE	REVISION	BY
△	7-27-68	ES & EL END	T.M.C.
△	7-8-68	AS NOTED	T.M.C.
△	6-[illegible]-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

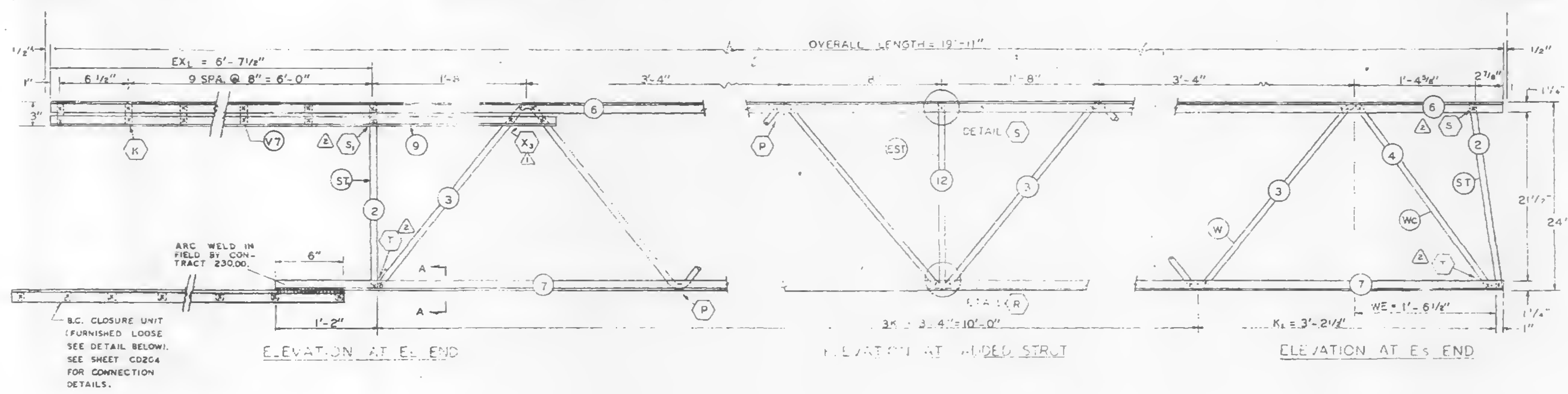
BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT. MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-7
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A
DATE
DRAWN BY: [illegible]
DATE FEB. 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY: J.R. PAUL
DATE FEB. 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY [illegible] WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT212



TRUSS ELEVATION

FABRICATION REQUIREMENTS	DESIGN	[illegible]
CAMBER AT MIDSPAN	[illegible]	[illegible]
DESIGN DEPTH	[illegible]	[illegible]
PANEL "K"	[illegible]	[illegible]
PANEL "K1"	[illegible]	[illegible]
WEB DEPTH	[illegible]	[illegible]
OVERALL LENGTH	[illegible]	[illegible]



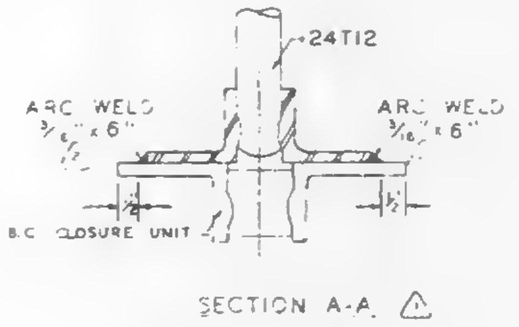
ELEVATION AT EL END

ELEVATION AT WELDED STRUT

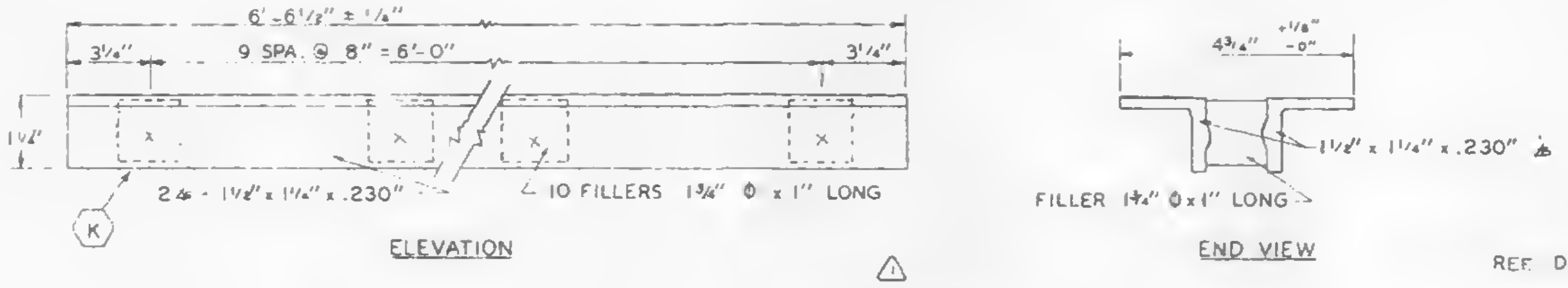
ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (x).
ALL WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. Ⓐ.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A △


6'-6 1/2" ± 1/4"
3 1/4"
9 SPA. @ 8" = 6'-0"
3 1/4"
1 1/2"
2∠s - 1 1/2" x 1 1/4" x .230"
10 FILLERS 1 3/4" ϕ x 1" LONG
K
4 3/4" +1/8" -0"
1 1/2" x 1 1/4" x .230" ∠s
FILLER 1 3/4" ϕ x 1" LONG

ELEVATION

END VIEW

△

B.C. CLOSURE UNIT

REF. DWG.
7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15.1 1-3-68
7-AB4-16 & 18 5-6-67
7-AB4-19, 28 & 41 1-3-68
7-AB4-38 A-1-68

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1 1/2"x1 1/4"x.23" ∠s	6'-6 1/2"
10	1 3/4" ϕ FILLERS	1"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
1911	6	A242	1 1/2"x1 1/4"x.230"	19'-11"	7	A242	1 1/2"x1 1/4"x.230"	14'-5 1/2"	3	A242	.75	17 1/2-11 1/4"	3 1/2 K @ 3'-4" = 11'-8"	12	A242	.75	1'-10 7/8"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/2"

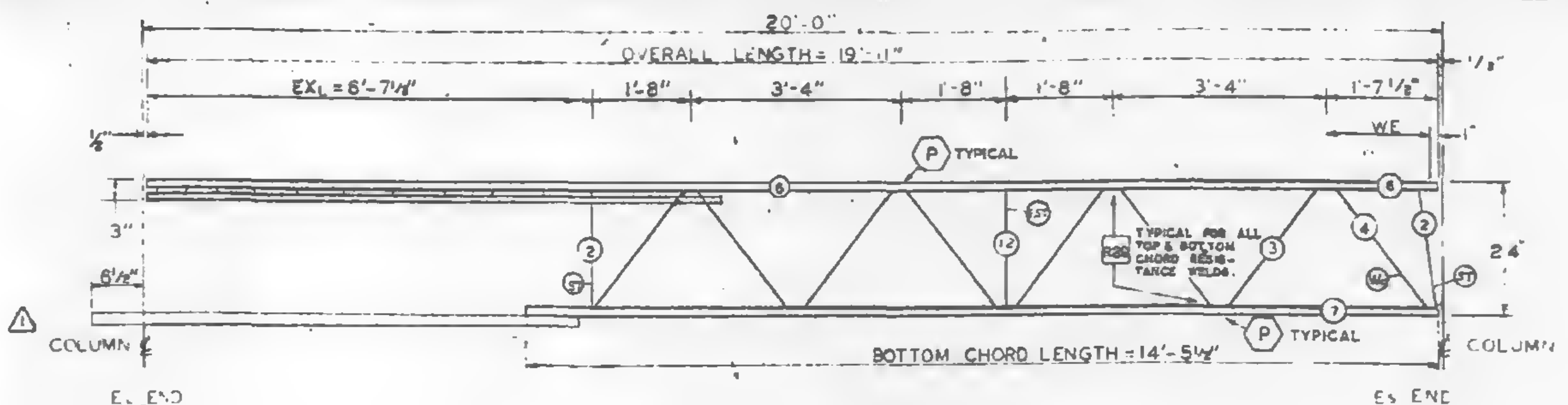
EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/2"x1 1/4"x.230"	8'-8"	6'-7 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/8"	10

NO.	DATE	REVISION	BY
2	7-8-68	AS NOTED	T.M.C.
1	6-26-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

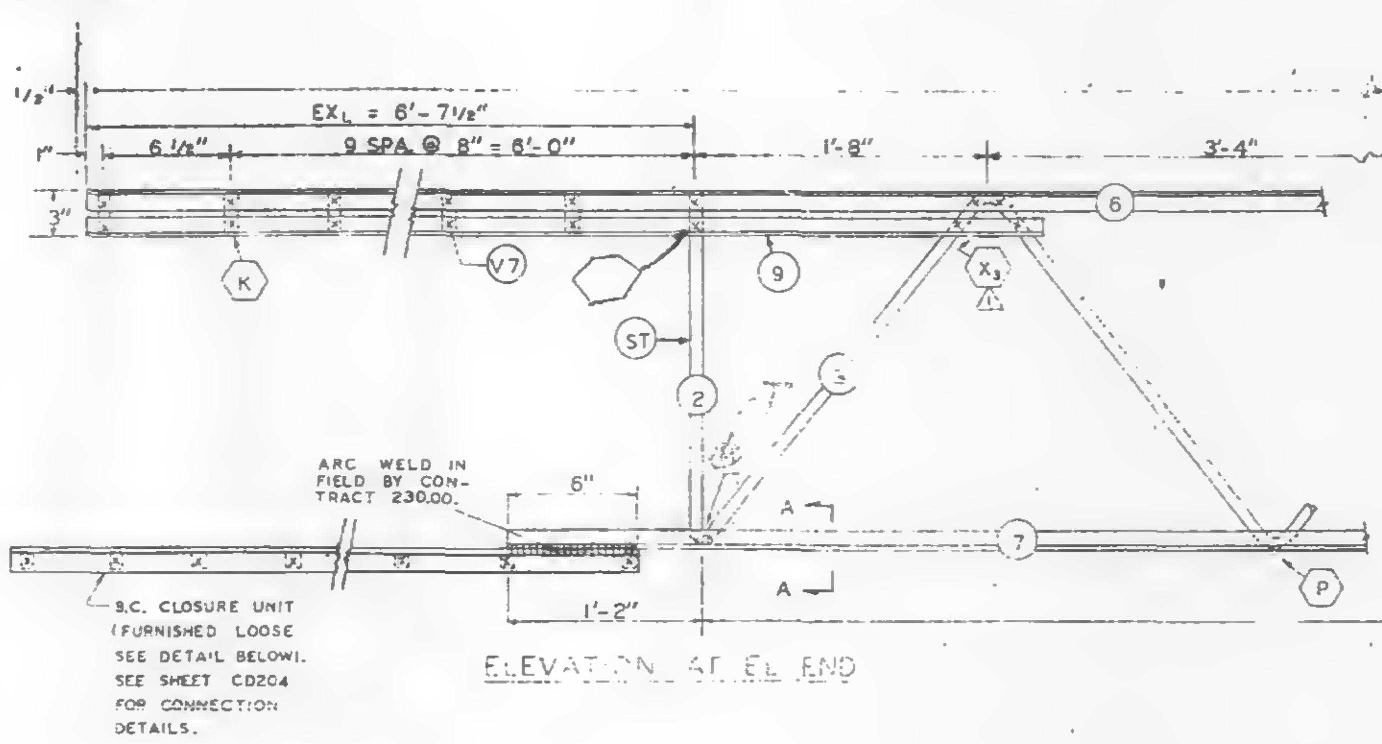
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-7 PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA DATE 7/9/68
DRAWN BY [illegible] DATE FEB. 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: J.R. PAUL DATE FEB. 24, 1968
IN CHARGE OF PROD DEV
DETAILED BY A C WEBER
FABRICATION CONT NO WTC 221
SHEET NO. BT212



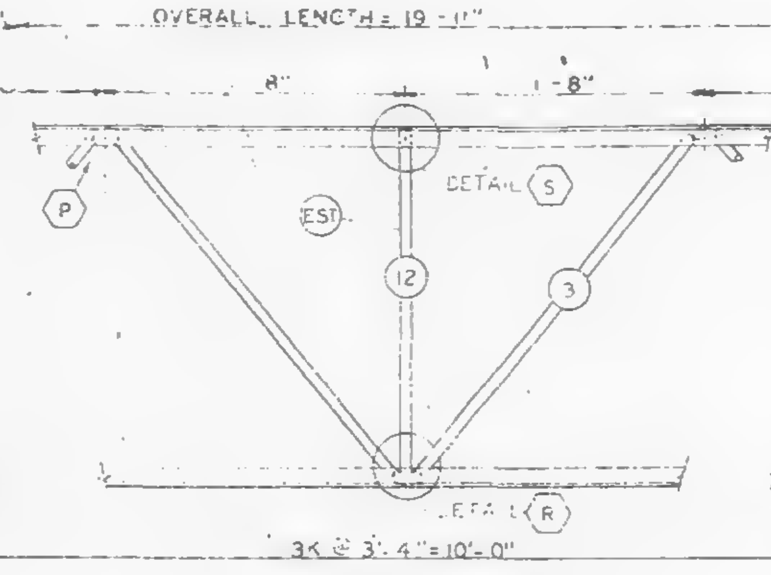
TRUSS ELEVATION

	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/8"

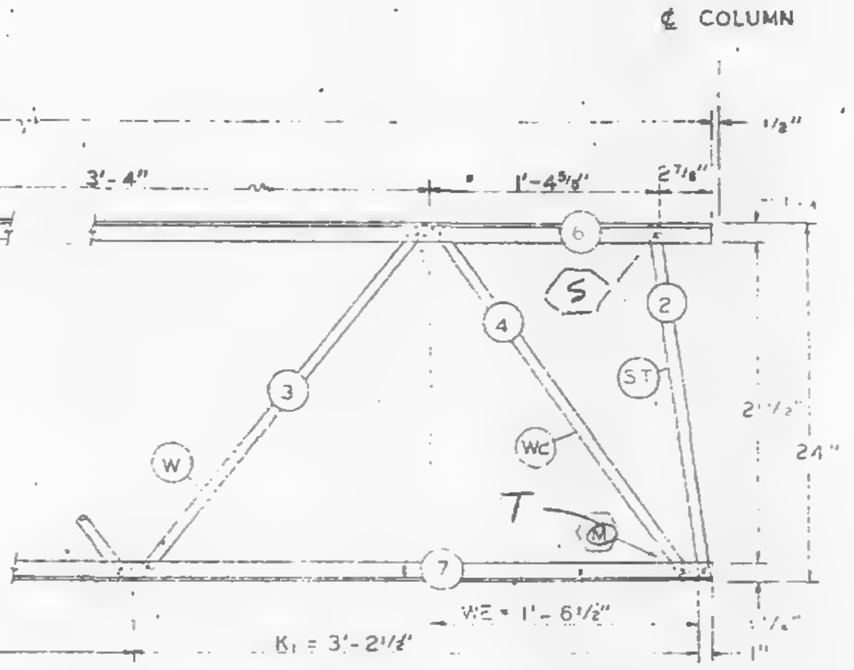
Table: FABRICATION REQUIRMENTS


℄ COLUMN
1/2"
EXL = 6'-7 1/2"
1"
6 1/2"
9 SPA. @ 8" = 6'-0"
1'-8"
3'-4"
3"
6
K
V7
9
X3
ST
2
T
S
ARC WELD IN FIELD BY CONTRACT 230.00.
6"
A
A
7
P
1'-2"
B.C. CLOSURE UNIT (FURNISHED LOOSE SEE DETAIL BELOW). SEE SHEET CD204 FOR CONNECTION DETAILS.

ELEVATION AT EL END



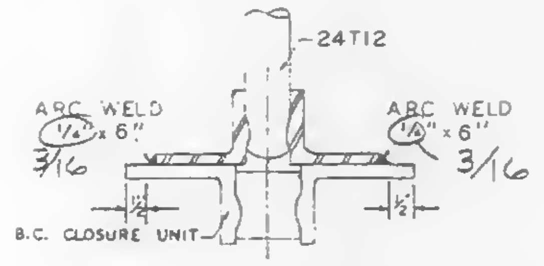
ELEVATION AT ADDED STRUT



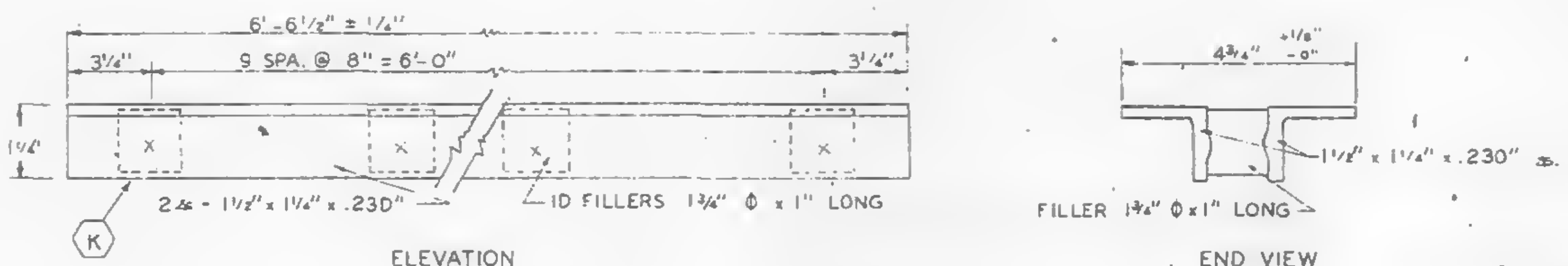
ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES.
ALL WELD-DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD2D4 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A △


6'-6 1/2" ± 1/4"
3 1/4"
9 SPA. @ 8" = 6'-0"
3 1/4"
1 1/4"
X
K
2 ∠ - 1 1/2" x 1 1/4" x .230"
1D FILLERS 1 3/4" Φ x 1" LONG
4 3/4" +1/8" -0"
1 1/2" x 1 1/4" x .230" ∠s.
FILLER 1 3/4" Φ x 1" LONG

ELEVATION

END VIEW

△
B.C. CLOSURE UNIT

REF. DWG.

7-AB2-1	4-1-68
7-AB2-7	2-15-68
7-AB4-15.1	1-3-68
7-AB4-16 & 18	5-8-63
7-AB4-19, 28 & 41	1-3-68
7-AB4-36	4-1-68

MATERIAL LIST FOR B.C. CLOSURE UNIT

PCS.	SIZE	LENGTH
2	1 1/2"x1 1/4"x.23" ∠s	6'-6 1/2"
1D	1 3/4" Φ FILLERS	1"

PAINT
LACLEDE ELECTROCOAT
RED NO 1000.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1 1/2"x1 1/4"x.230"	19'-11"	7	A242	1 1/2"x1 1/4"x.230"	14'-5 1/2"	3	A242	.75	17'-11 1/4"	3 1/2K @ 3'-4" = 11'-8"	12	A242	.75	1'-10 7/8"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/2"x1 1/4"x.230"	8'-8"	6'-7 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/8"	1D

SKILLING-HELLE
CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
7/5/68 SK

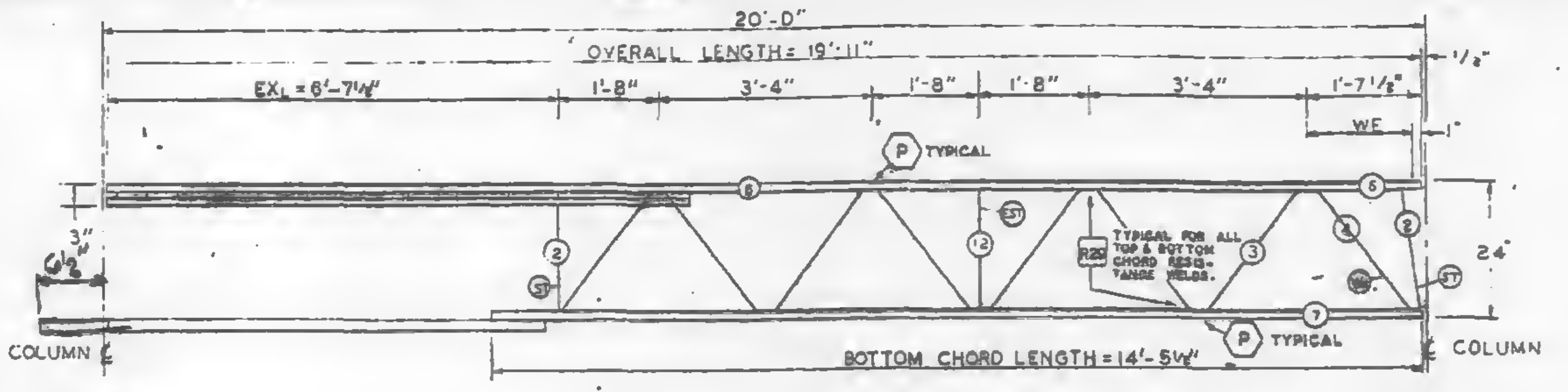
NO.	DATE	REVISION	BY
△1	6-26-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

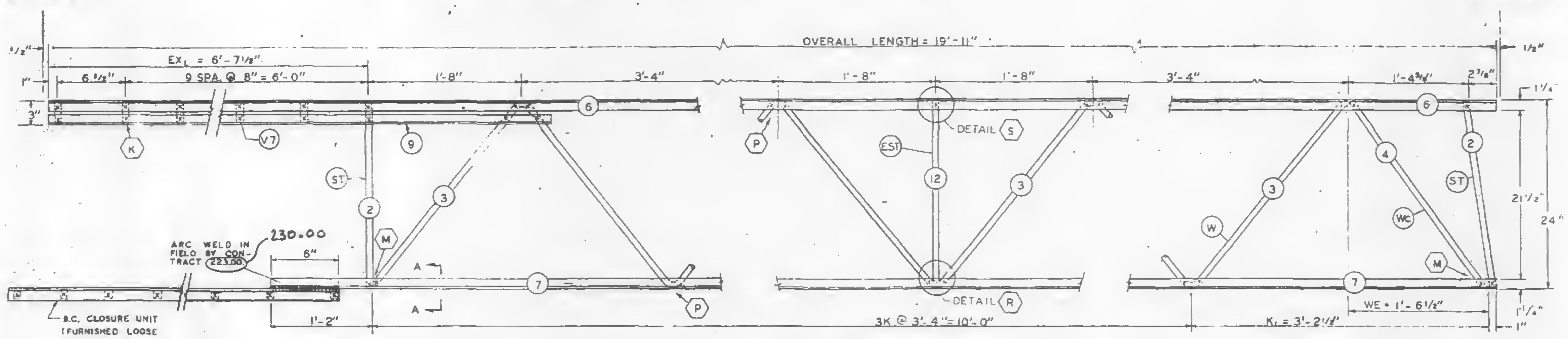
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-7	PLATE
APPROVED FOR FABRICATION BY - FOR P.O.N.Y.A.	DATE	DRAWN BY DATE FEB. 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB. 24, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A C WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT212



TRUSS ELEVATION

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 1/8"
DESIGN DEPTH	24"	± 1/8"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2 1/8"	± 1/16"
WEB DEPTH	23 1/2"	± 1/8"
OVERALL LENGTH	19'-11"	± 1/8"



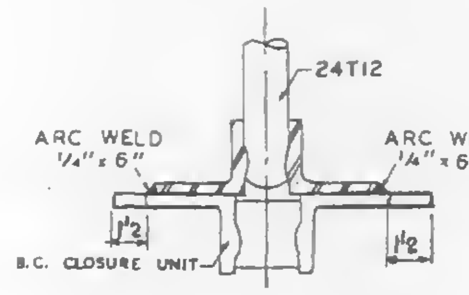
ELEVATION AT EL END

ELEVATION AT ADDED STRUT

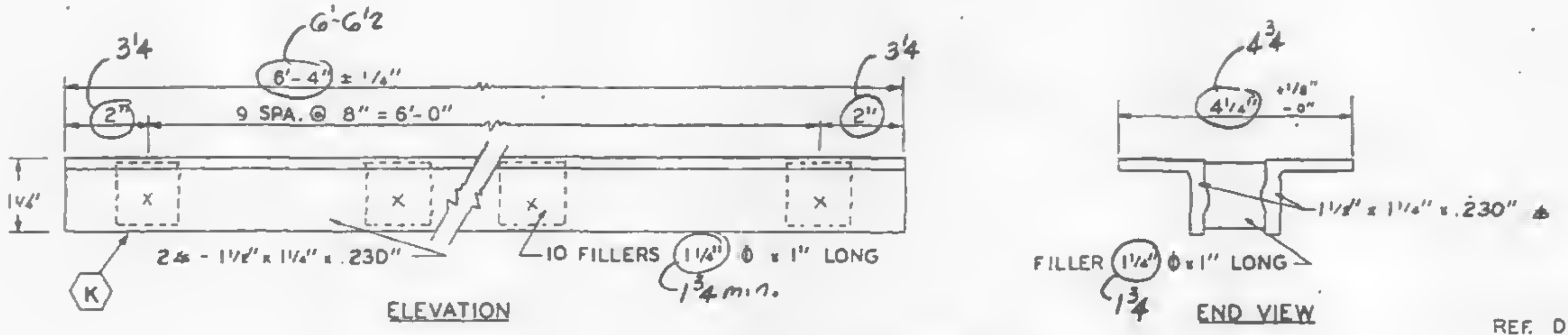
ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST290,
ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION
DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A


3 1/4
6'-6 1/2
6'-4" ± 1/4"
3 1/4
2"
9 SPA. @ 8" = 6'-0"
2"
1 1/4"
K
2∠ - 1 1/2" x 1 1/4" x .230"
10 FILLERS 1 1/4" ϕ x 1" LONG
1 3/4 min.
4 3/4
4 1/4"
+1/8"
-0"
1 1/2" x 1 1/4" x .230" ∠
FILLER 1 1/4" ϕ x 1" LONG
1 3/4

ELEVATION

END VIEW

B.C. CLOSURE UNIT

REF. DWG. 7-AB2-1 2-15-68
7-AB2-7 2-15-68
7-AB4-15.1 10-27-67
7-AB4-16,18 & 19 1-3-68
7-AB4-28,38 & 41 1-3-68

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1 1/2" x 1 1/4" x .23" ∠	6'-4"
10	1 1/4" ϕ FILLERS	1"
	1 3/4 min	

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1 1/2" x 1 1/4" x .230"	19'-11"	7	A242	1 1/2" x 1 1/4" x .230"	14'-5 1/2"	3	A242	.75	17'-11 1/4"	3 1/2 K @ 3'-4" = 11'-8"	12	A242	.75	1'-10 1/8"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/2" x 1 1/4" x .230"	8'-8"	6'-7 1/2"	–	—	–	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/8"	10

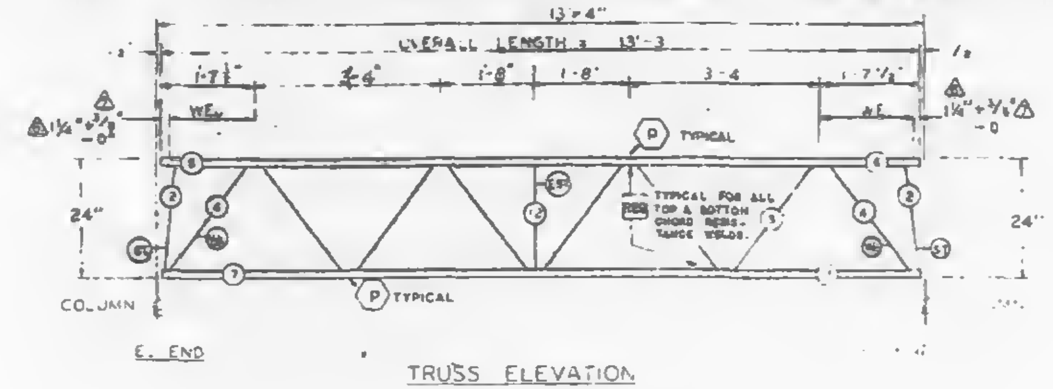
SKILLING · HELLE
CHRISTIANSEN ROBERTSON
Structural & ... Engineers
4/26/68 SK

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

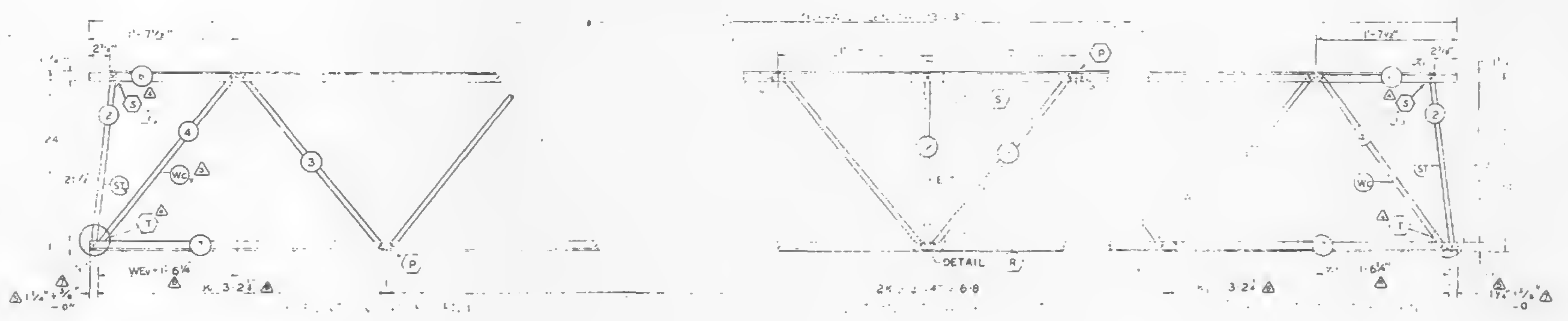
BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO: 7-AB2-7	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE	DRAWN BY: [illegible] DATE FEB. 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE.	CHECKED BY: J.R. PAUL DATE FEB. 24, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W C. 221	SHEET NO BT212



TRUSS ELEVATION



FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MID SPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB SPAN	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3'	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e. Ⓐ. LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. R29.

△ REF DRWG

ABL 1	4-1-68
AB2 8	2-15-68
AB4 12 & 19	1-3-68
AB4 16, 8	5-6-68
AB4 28 & 41	[illegible]
7-AB9-38	4-1-68

TRUSS DESIGNATION											NUMBER REQUIRED
24T13	133	A242	13'-3"	13'-3"	3	A242	75	15'-4"	3K 3-4	10'-0"	1

ES END	TRUSS DESIGNATION		WL	INCLINED ST STRUT MK	TYPE STEEL	DIA	LENGTH	WEB "Wc" MK	TYPE STEEL	PCS	DIA	LENGTH
	[illegible]	133	1'-6¼"	2	A242	.75	[illegible]	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION		BEARING ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	WEv	DIAGONAL "T" STRUT MK	TYPE STEEL	DIA	LENGTH	INCLINED "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	END STIFFENER MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	WEB "Wc" MK	TYPE STEEL	PCS	DIA	LENGTH
	24T13	133	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO	DATE	REVISION	BY
7	8-29-68	END DIST. ②	T.M.C.
6	8-28-68	AS NOTED	T.M.C.
5	7-27-68	END DIST. ②	T.M.C.
4	7-8-68	AS NOTED	T.M.C.
3	5-25-68	LENGTH OF "EST" WCv. REF DRWG.	T.M.C.
2	4-25-68	WEB DIMENSIONS	T.M.C.
1	7-10-65	WEB	J.R.P.

BRIDGING TRUSS 24T13 13'-3" L2[illegible]

WORLD TRADE CENTER TOWERS A B

LACLEDE STEEL COMPANY

MADISON, ILLINOIS

AB2 8

James White 9/4/68

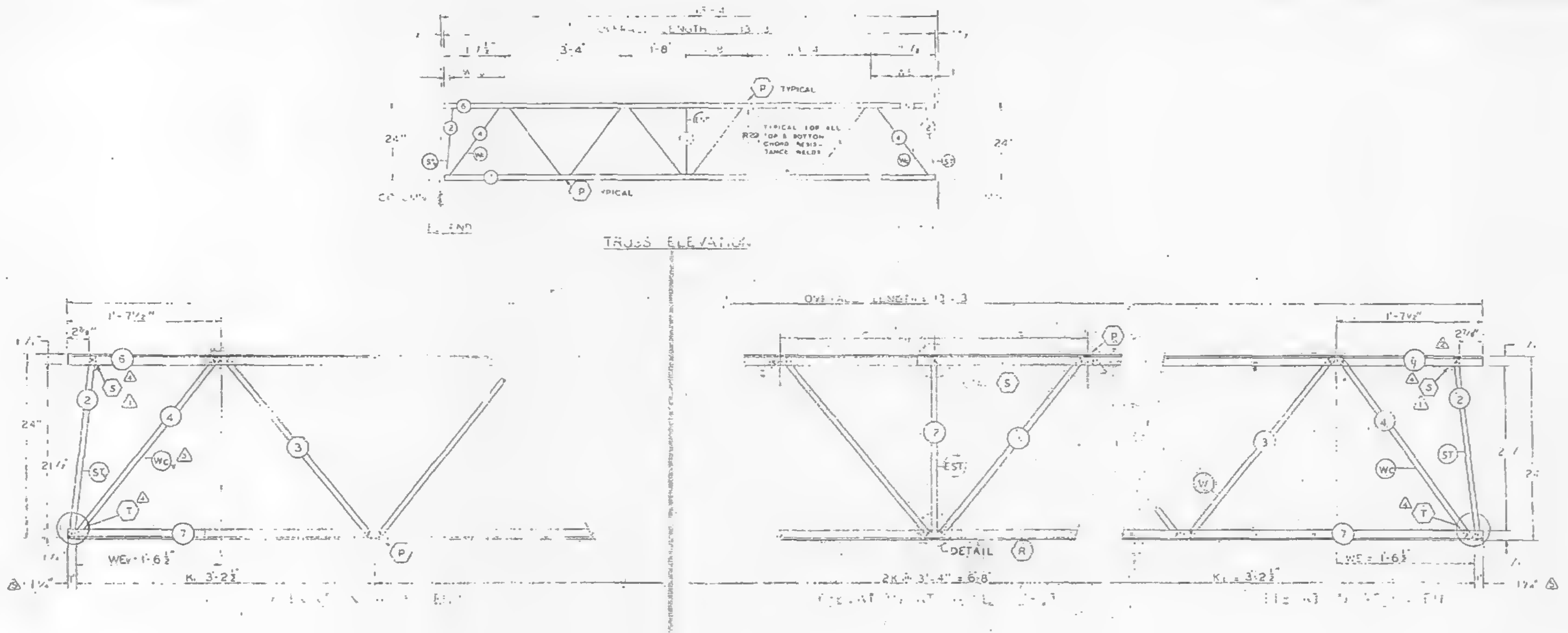
FEB 24

FEB 24 1968

LACLEDE STEEL CO.

221

BE213



	[illegible]	[illegible]
[illegible]	0"	[illegible]
[illegible]	24"	[illegible]
[illegible]	3'-4"	[illegible]
PANEL [illegible]	3'-2½"	[illegible]
[illegible]	23⅞"	[illegible]
OVERALL LENGTH	3'-3"	[illegible]

ALL PANEL POINTS RESISTANCE WELDED [illegible] ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES [illegible]. ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.

REF. DRWG.
[illegible] 4-1-68
[illegible] 2-5-68
7-A84-[illegible] 19 1-3-68
7-A84-[illegible] 5-6-68
7-A84-29 & 41 [illegible]
7-A84-38 4-1-68

TRUSS DESIGNATION	TWO ANGLES										MAIN WEB				VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	[illegible]	LENGTH	MK	[illegible]	[illegible]	[illegible]	LENGTH	MK	TYPE STEEL	DIA	LENGTH	[illegible]	MK	TYPE STEEL	DIA	LENGTH	
24T13-133	5	A242	[illegible]	13'-3"	7	A242	[illegible]	[illegible]	13'-3"	3	A242	.75	15'-4½"	3K@3'-4=10'-0"	12	A242	.75	[illegible]	1

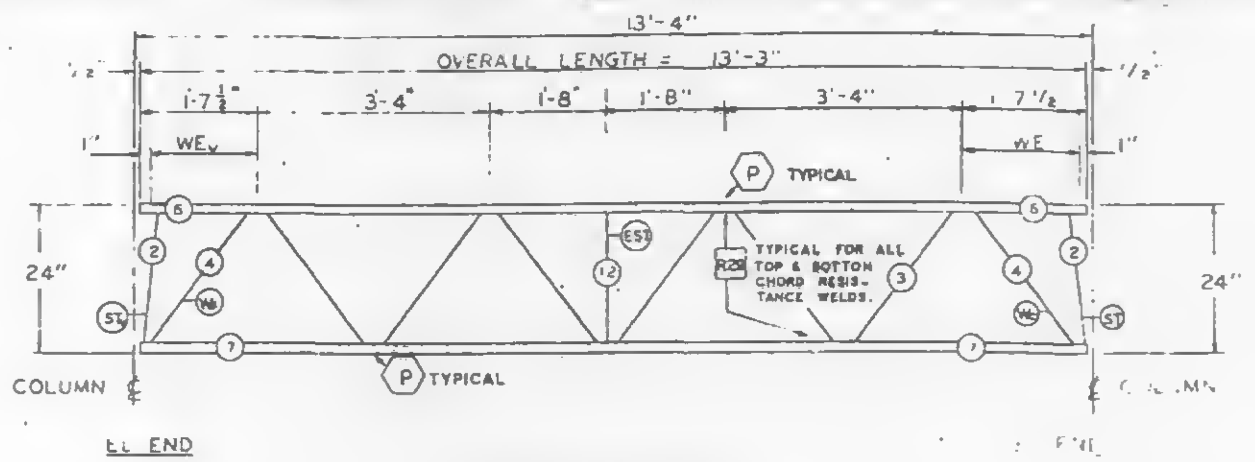
TRUSS DESIGNATION	W	INCLINED "ST" STRUT				WEB "WC"				
		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T13-133	1'-6⅞"	[illegible]	A242	.75	[illegible]	4	A242	1	.75	2'-5½"

TRUSS DESIGNATION	BEARING ANGLES				WEV	DIAGONAL STRUT			INCLINED "V" STRUT				END STIFFENER						WEB "WCv"				
	MK	TYPE STEEL	NOM. SIZE	LENGTH		TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T13-133	—	—	—	—	6½"	—	—	—	2	A242	.75	1-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO	DATE	REVISION	BY
5	7-27-68	END DIST. (2)	T.M.C.
4	7-8-68	AS NOTED	T.M.C.
3	5-26-68	LENGTH OF "EST" WCv. REF. DRWG.	T.M.C.
2	4-23-68	WEB DIMENSIONS	T.M.C.
1	3-12-68	WEB	[illegible]

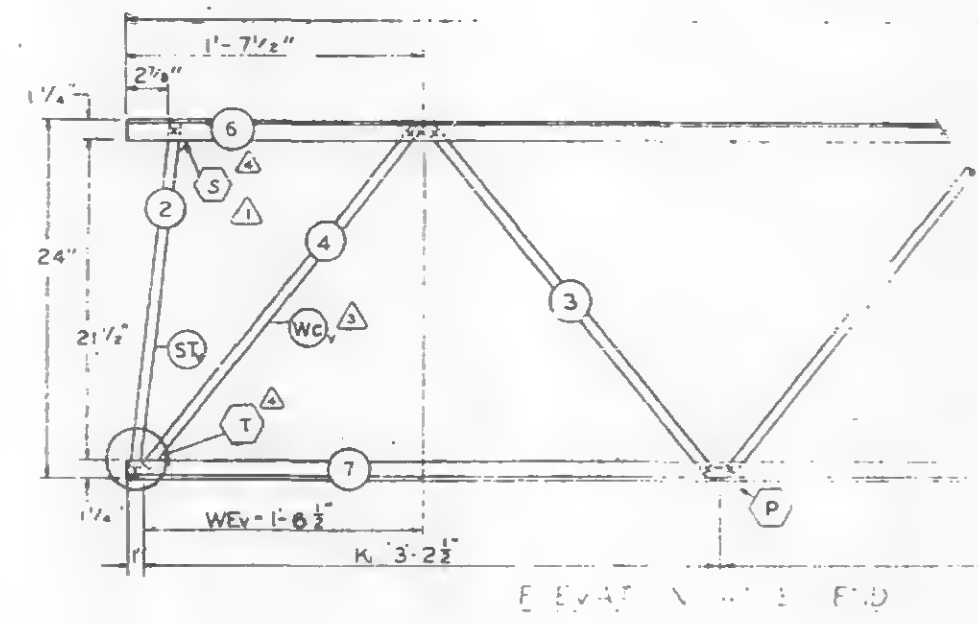
PAINT
[illegible] ELECTROCOAT
RED [illegible]

[illegible] DETAILS
[illegible] SYSTEM [illegible]
THE PORT OF NEW YORK AUTHORITY
[illegible] 24T13 13-3" [illegible]
WORLD TRADE CENTER TOWERS A & B
[illegible]
Wab 2/2/68
ST2[illegible]

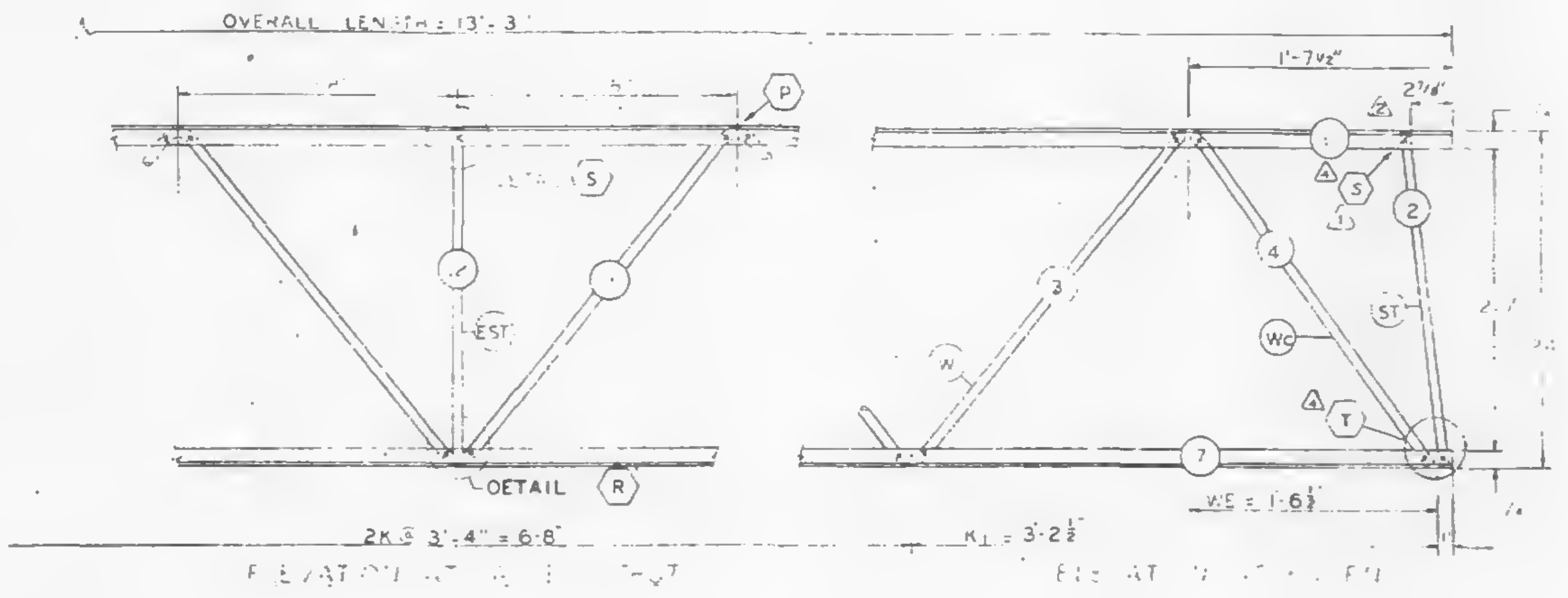


TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"



ELEVATION [illegible] END



ELEVATION AT [illegible]

[illegible] END

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e. A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	
24T13-133	6	A242	1½"×1¼×230	13'-3"	[illegible]	A242	1½×1¼×230	13'-3"	3	A242	75	15'-4½"	3K@3'-4" = 10'-0"	12	A242	.75	1'-10⅞"	1

Es ND	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6½"	2	A242	75	1'-11¾"	4	A242	1	.75	2'-5¼"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "STv" STRUT				END STIFFENER						WEB "Wcv" 3				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5¼"

△3 REF DRWG.
7-AB2-1 4-1-68
7-AB2-8 2-15-68
7-AB4-15,1,19 1-3-68
7-AB4-16,18 5-6-68
7-AB4-28 & 41 1-3-68
7-AB4-38 4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO C001

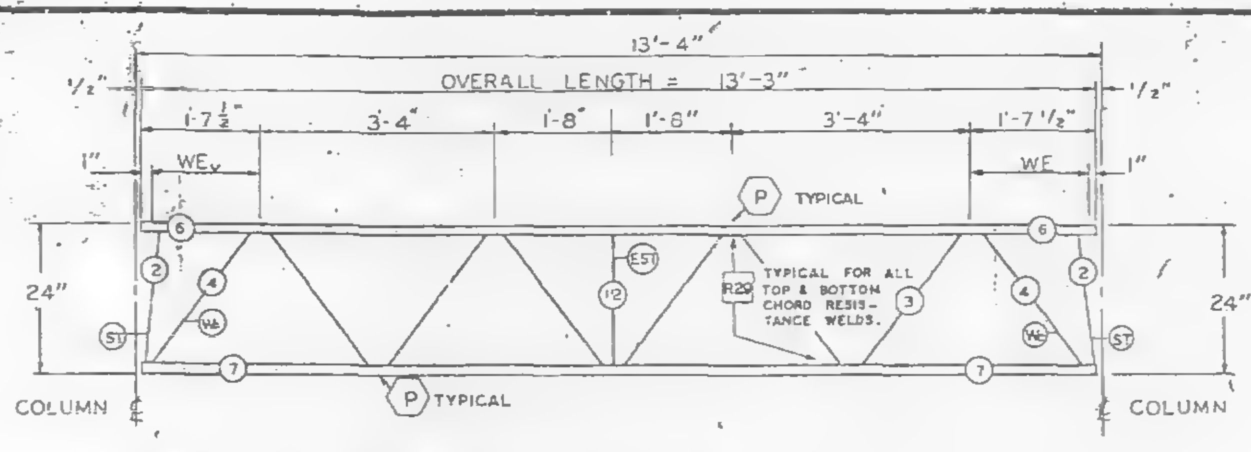
NO.	DATE	REVISION	BY
4	7-5-68	AS NOTED	T.M.C.
3	6-26-68	LENGTH OF "EST", WCv. REF. DRWG.	T.M.C.
2	4-25-68	WEB DIMENSIONS*	T.M.C.
1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

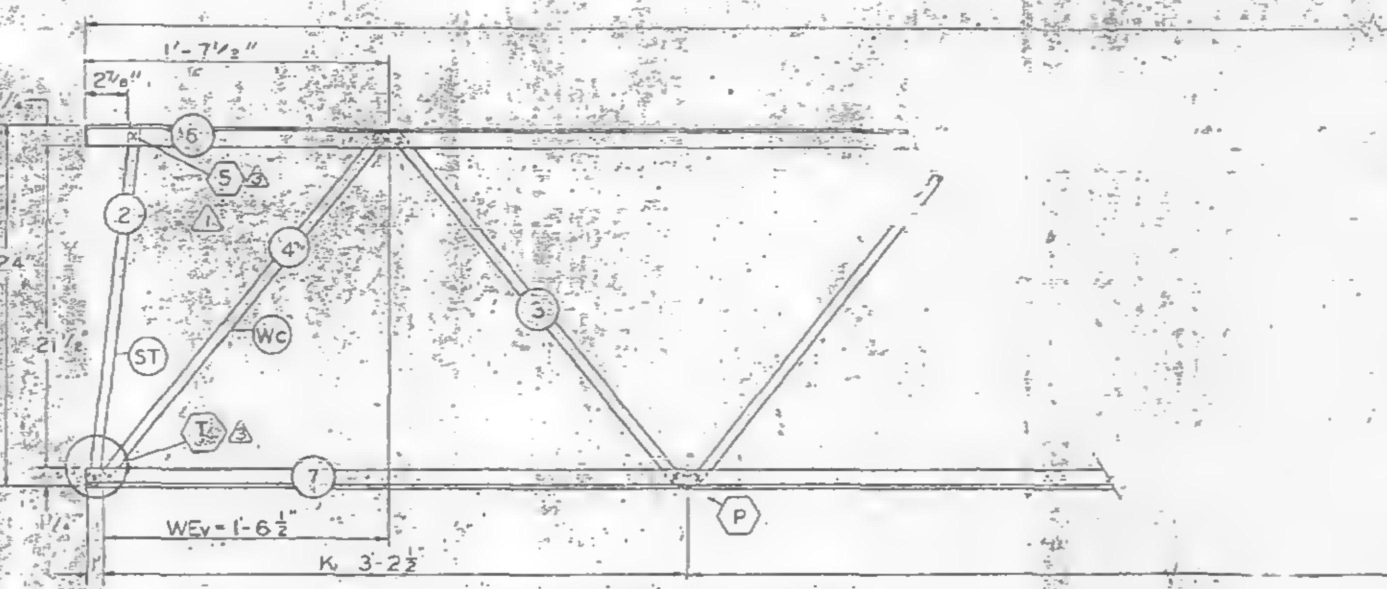
BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

LACLEDE STEEL COMPANY

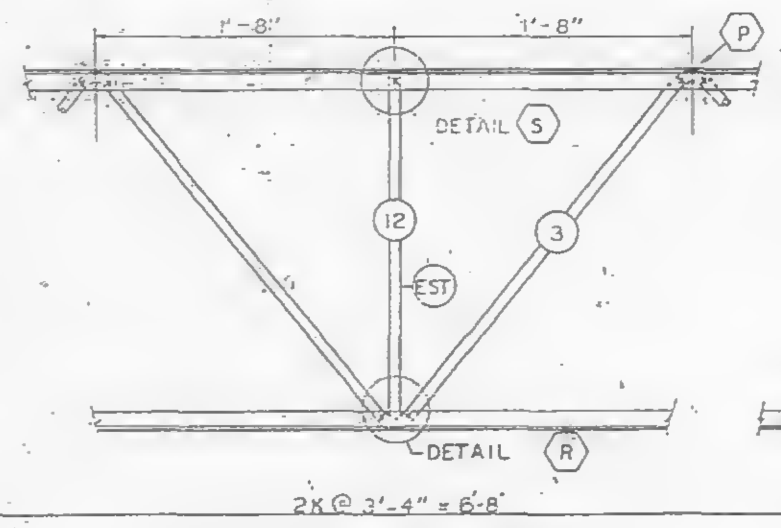
AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-B
PLATE:
JW 7/24/68
DRAWN BY J.R.
DATE FEB 24 1968
CHECKED BY J.R.PAUL
DATE FEB 24 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT NO W T C 221
SHEET NO. BT213



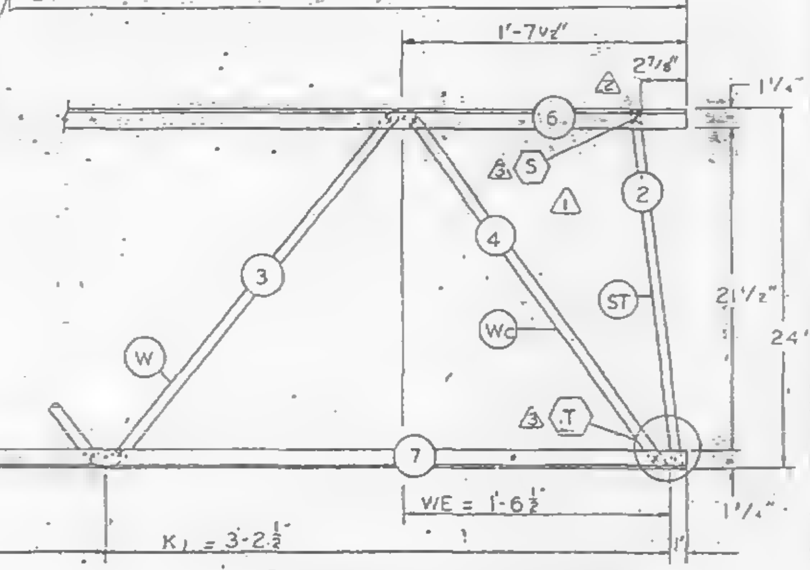
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▨). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠ LETTERS IN HEXAGON INDICATE WELD DETAIL, ie: A. LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie: R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	6	A242	1½"x1¼"x.230	13'-3"	7	A242	1½"x1¼"x.230	13'-3"	3	A242	.75	15'-4½"	3K@3'-4"=10'-0"	12	A242	.75	1'-10⅛"	1

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

REF. DRWG.

7-A82-1	2-15-68
7-A82-8 ←	2-15-68
7-A84-15:1	10-27-67
7-A84-16 18 & 19	1-3-68
7-A84-28 38 & 41	1-3-68

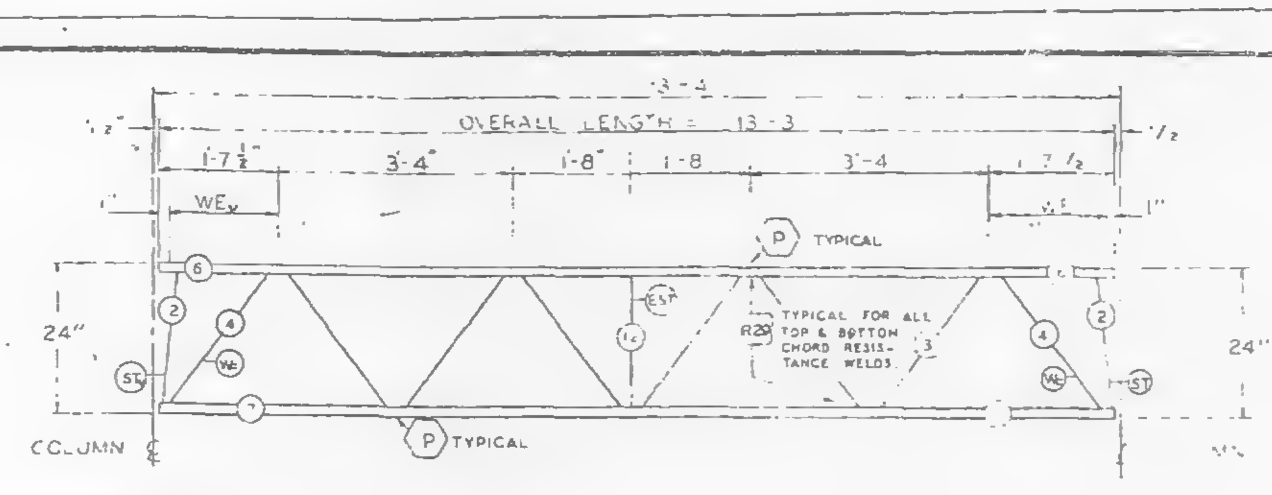
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY
3	7-8-68	AS NOTED	T.M.C.
2	4-25-68	WEB DIMENSIONS	T.M.C.
1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

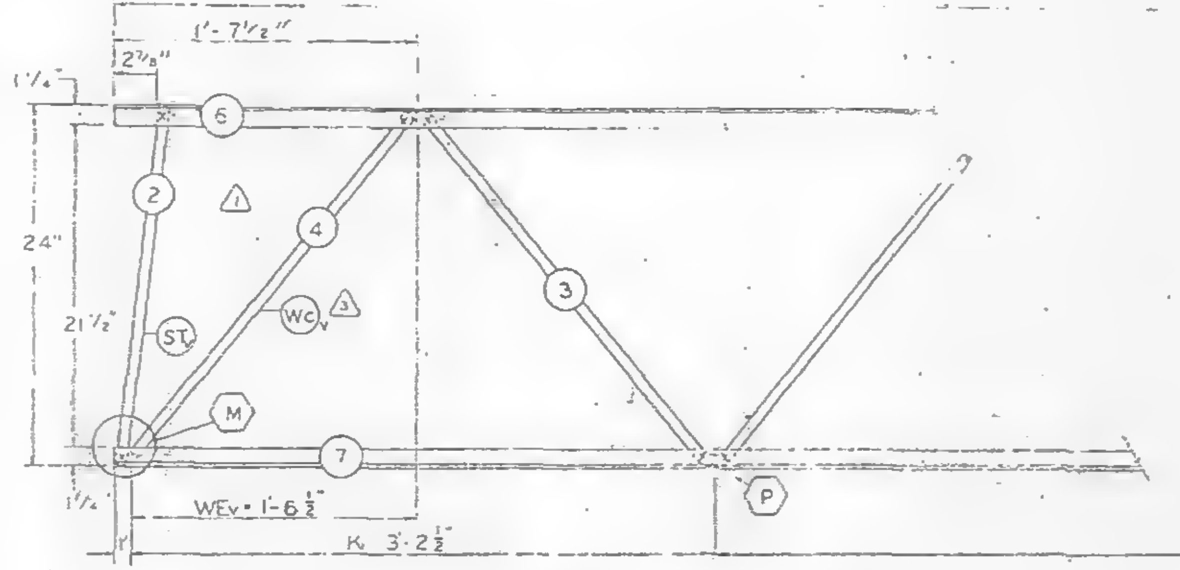
BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-A82-8
PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA
DATE 7/9/68
DRAWN BY J. R.
DATE FEB 24 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY J.R PAUL
DATE FEB 24 1968
IN CHARGE OF PROD. DEV.
STARTED BY A. C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO BT213

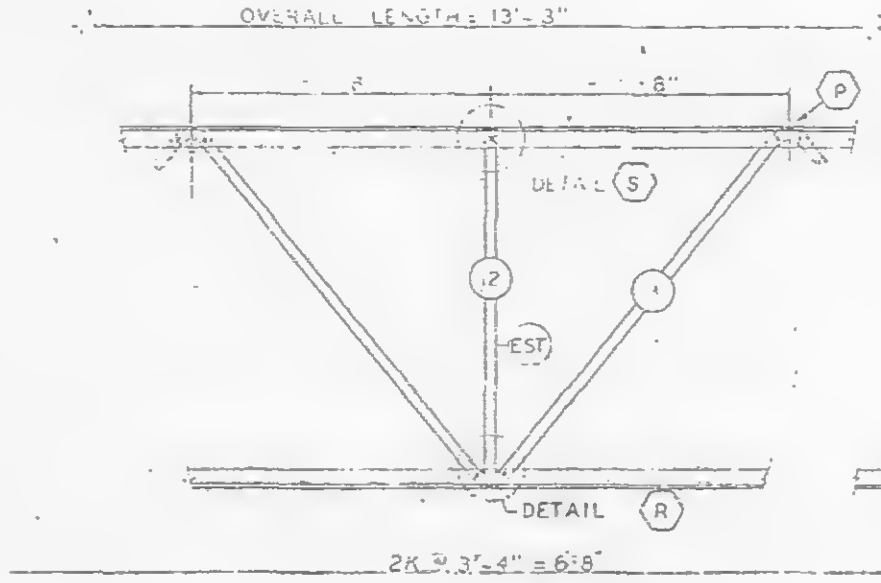


TRUSS ELEVATION

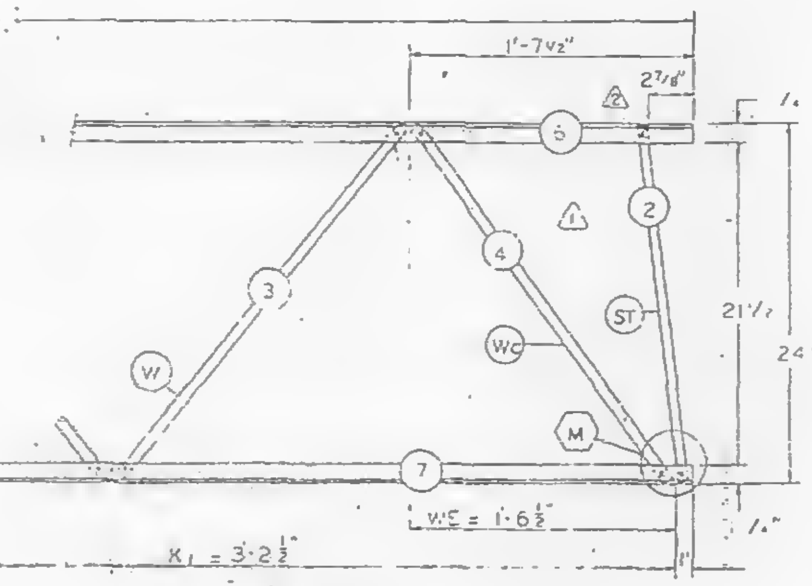
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"



ELEVATION AT EL END



ELEVATION AT [illegible] STRUT



ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (X). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (maxim). ALL WELD DETAILS SHOWN ON SHEETS ST29D AND ST29I.

△1 LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

△3 REF. DRWG.

7-AB2-1	4-1-68
7-AB2-8	2-15-68
7-AB4-15 & 19	1-3-68
7-AB4-16, 18	5-6-68
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO. OF K	MK	TYPE STEEL	DIA	LENGTH △3	
24T13-133	6	A242	1½"x1¼x.230	13'-3"	7	A242	1½x1¼x.230	13'-3"	3	A242	.75	15'-4½"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-0⅞"	1

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc" △3				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS	DIA.	LENGTH
	24T13-133	–	—	—	—	1'-6½"	–	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

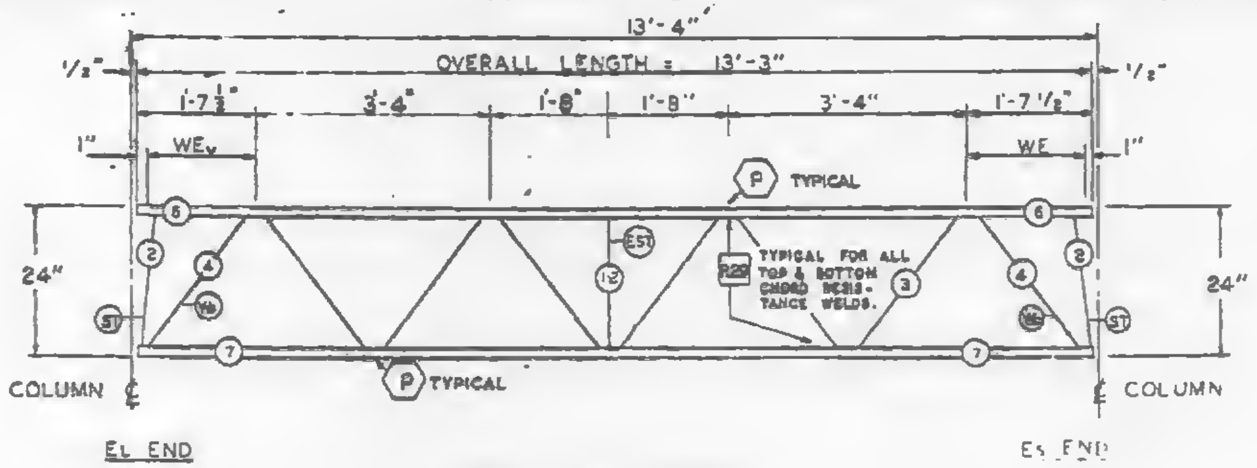
NO.	DATE	REVISION	BY
△3	5-26-68	LENGTH OF "EST", WCv. REF. DRWG.	T.M.C.
△2	4-25-68	WEB DIMENSIONS	T.M.C.
△1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

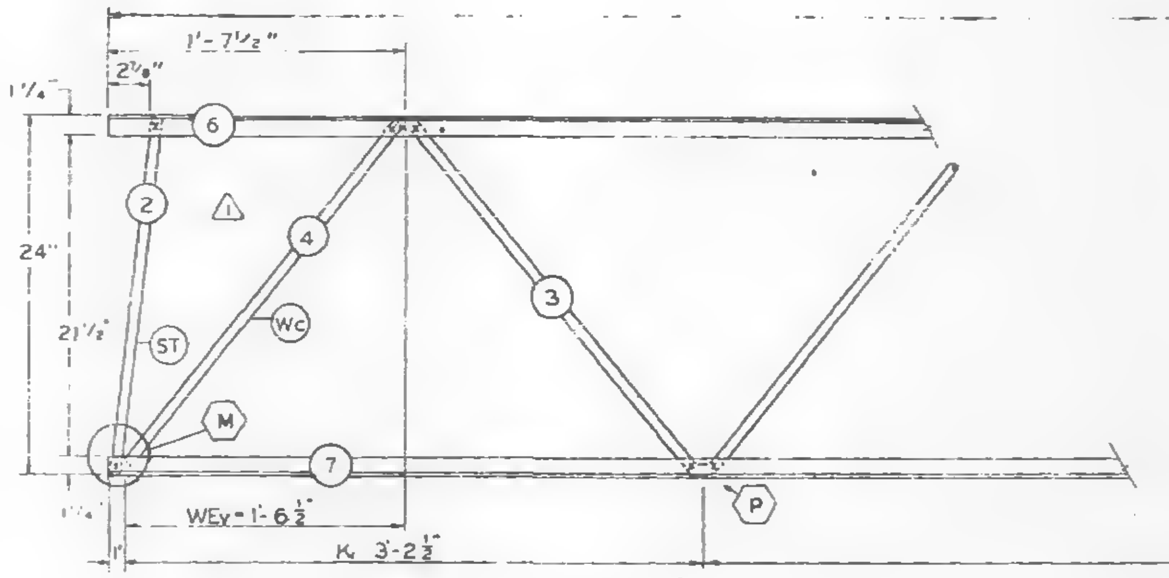
BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

APPROVED BY LACLEDE STEEL COMPANY

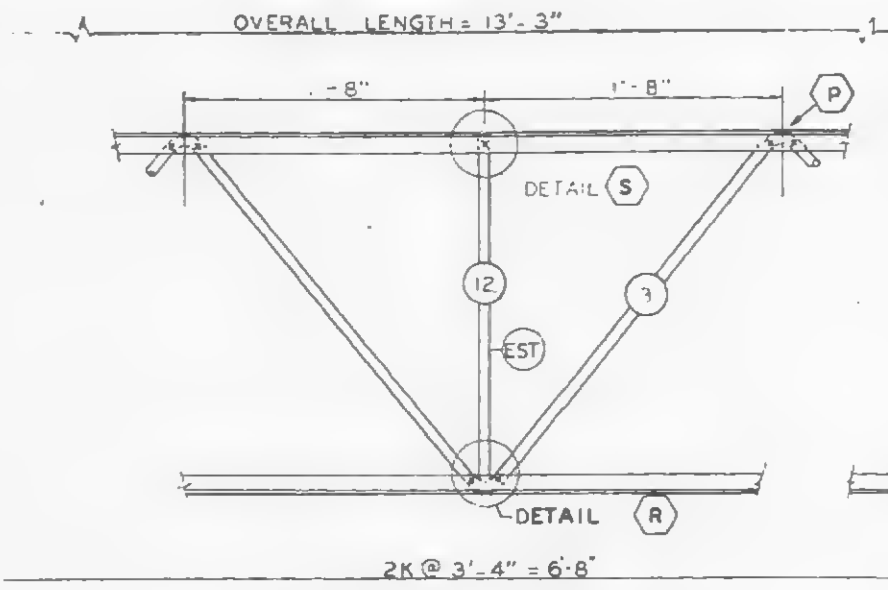
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-8	PLATE
APPROVED FOR FABRICATION BY JW FOR CONTRA	DATE 7/5/68	DRAWN BY J.B. DATE FEB 24 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R.PAU DATE FEB 24 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY [illegible]		FABRICATION CONT NO. WTC 221	SHEET NO BT213



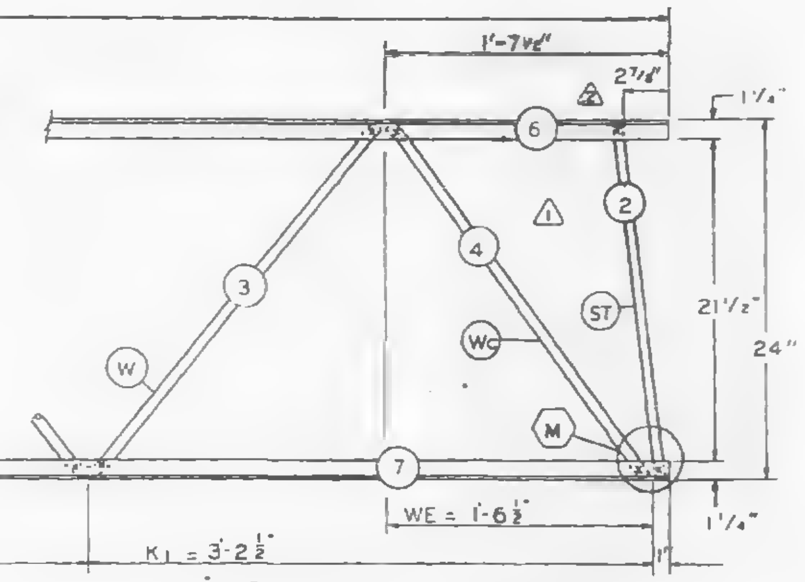
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/8"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2½"	± 1/8"
WEB DEPTH	23 ⅝"	± 1/8"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠ LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DRWG.	
7-AB2-1	2-15-68
7-AB2-8	2-15-68
7-AB4-15.1	10-27-67
7-AB4-16 18 & 19	1-3-68
7-AB4-28 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
REQ NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	6	A242	1½ x 1¼ x 230	13'-3"	7	A242	1½ x 1¼ x 230	13'-3"	3	A242	.75	15'-4⅛"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-10⅛"	1

Es END TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
24T13-133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

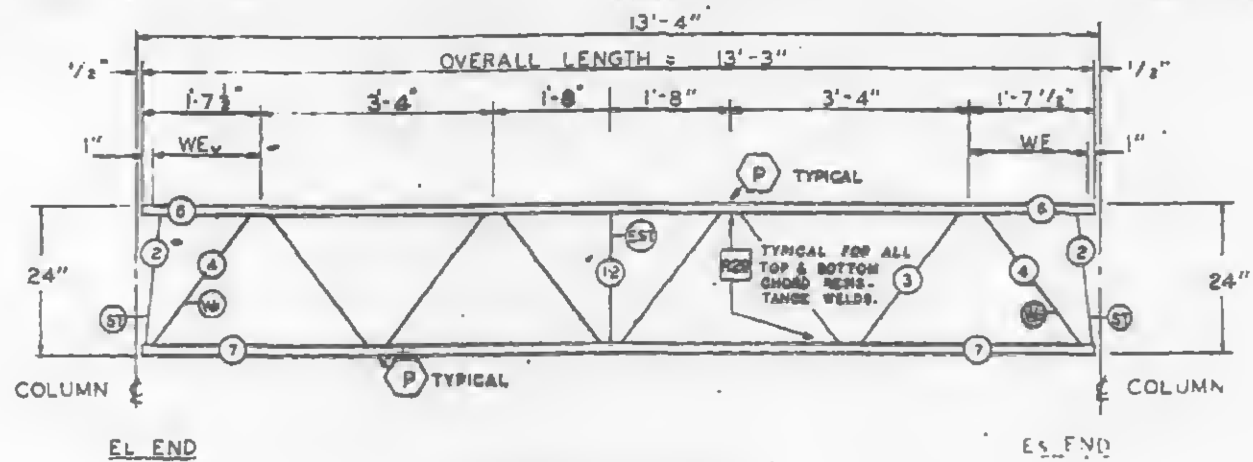
EL END TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER MK VS			END STIFFENER MK V6			WEB "Wc"				
	MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
24T13-133	–	—	—	—	1'-6½"	–	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO.	DATE	REVISION	BY
⚠2	4-25-68	WEB DIMENSIONS	T.M.C.
⚠1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

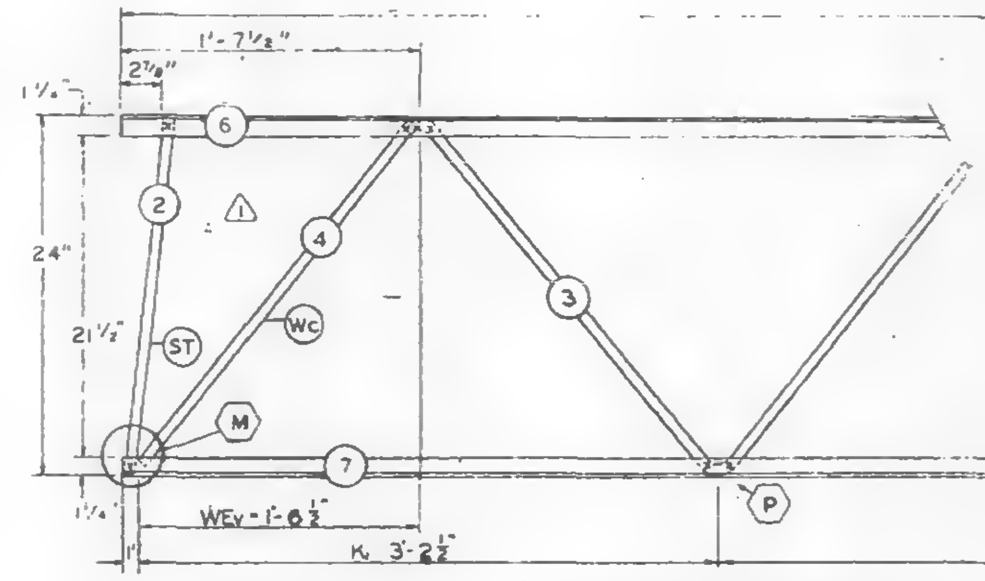
BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-8
PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A. DATE 5/1/68
DRAWN BY L.B
DATE FEB 24 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY J.R. PAUL
DATE FEB 24 1968
IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO BT213

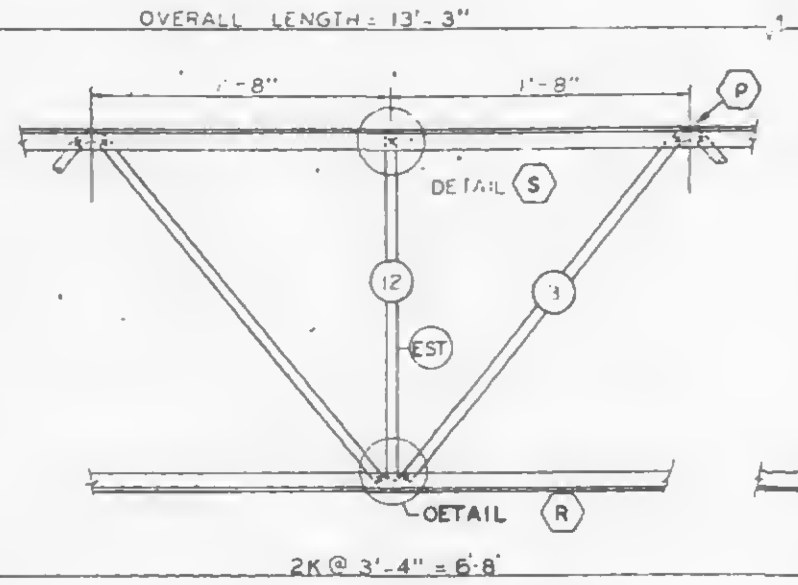


TRUSS ELEVATION

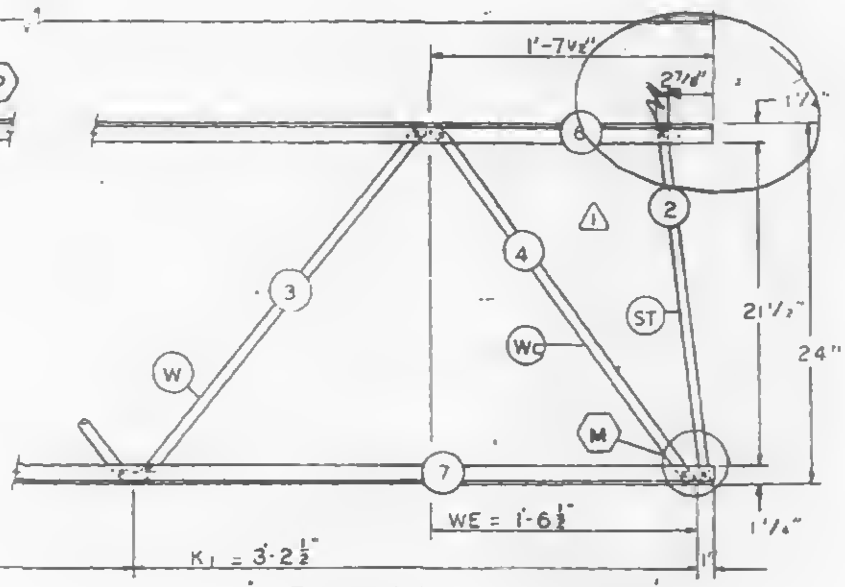
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K₁"	3'-2½"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠ LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DRWG.

7-A82-1	2-15-68
7-A82-8	2-15-68
7-A84-15.1	10-27-67
7-A84-16 18 & 19	1-3-68
7-A84-28 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	6	A242	1½"x1¼ x 23D	13'-3"	7	A242	1½"x1¼ x 23D	13'-3"	3	A242	.75	15'-4⅛"	3K@ 3'-4" = 10'-0"	12	A242	75	1'-10⅛"	1

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6½"	2	A242	75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK V5			MK V6							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	–	–	—	—	1'-6½"	-	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5¼"

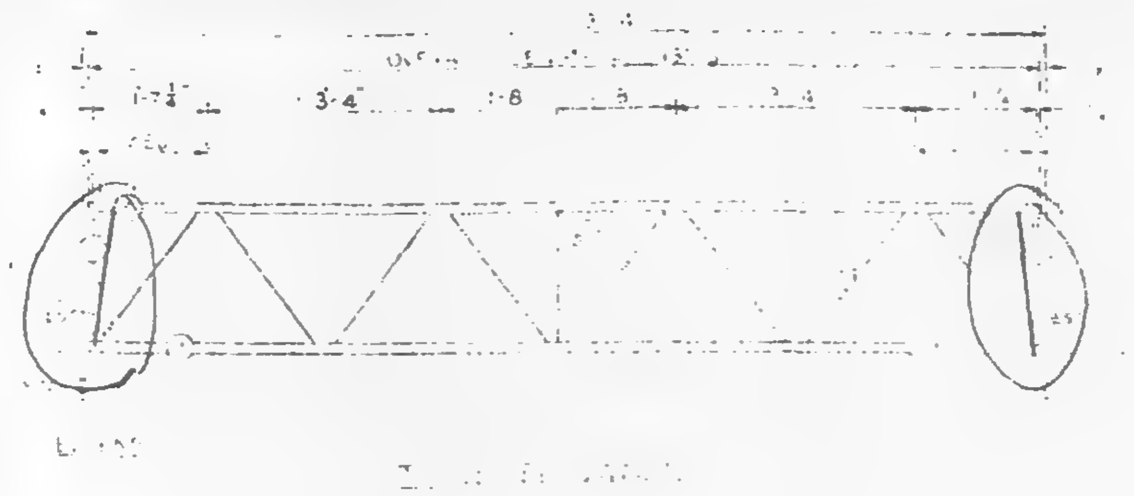
SKILLING HELLE
CHRISTIANSEN ROBERTSON
CONSULTING Engineers
X
4/24/68 . SK

NO.	DATE	REVISION	BY
⚠1	3-10-66	WEB	J.R.P.

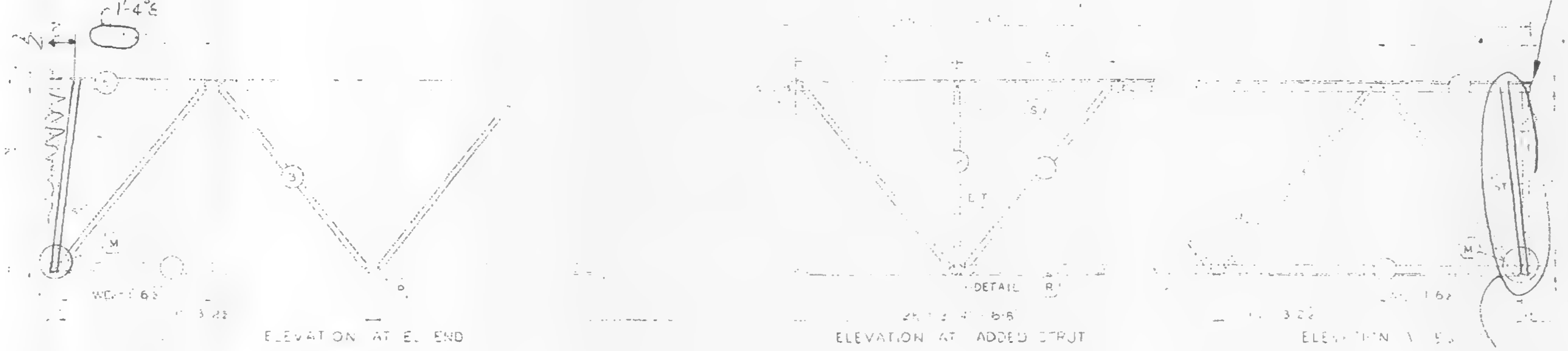
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-A82-8
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.
DATE
DRAWN BY J.R.
DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY J.R. PAUL
DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
LACLEDE [illegible] CO.
FABRICATION CONT NO W.T.C. 221
SHEET NO BT213



[illegible]	[illegible]	[illegible]
[illegible]	3' 2½	4"
[illegible]	2 ⅞	4"
OVERALL LENGTH	3'-3"	8"



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION

Note: "ST" Bar may be vertical if Laclede wishes to develop a splice detail to carry shear across joint

See left end

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▨). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

BOXED IN LETTERS INDICATE WELD DETAILS, i.e. (A).

REF. DWGS	[illegible]	2-15-68
	7 A82-8	2-15-68
	7 A84 10.1	0-20-8
	7 A94 6,18 & 19	[illegible]
	7 A94-29 48 & 41	3.68

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

LACLEDE STEEL COMPANY
MADISON, ILLINOIS
7 A82-8
DRAWN BY Luck
DATE FEB 24 '65
DATE FEB 24 '68
221
8T.213

LACLEDE STEEL CO.

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
APPROVED
APPROVED AS NOTED
✗ REVISE
3/20/67 - SK

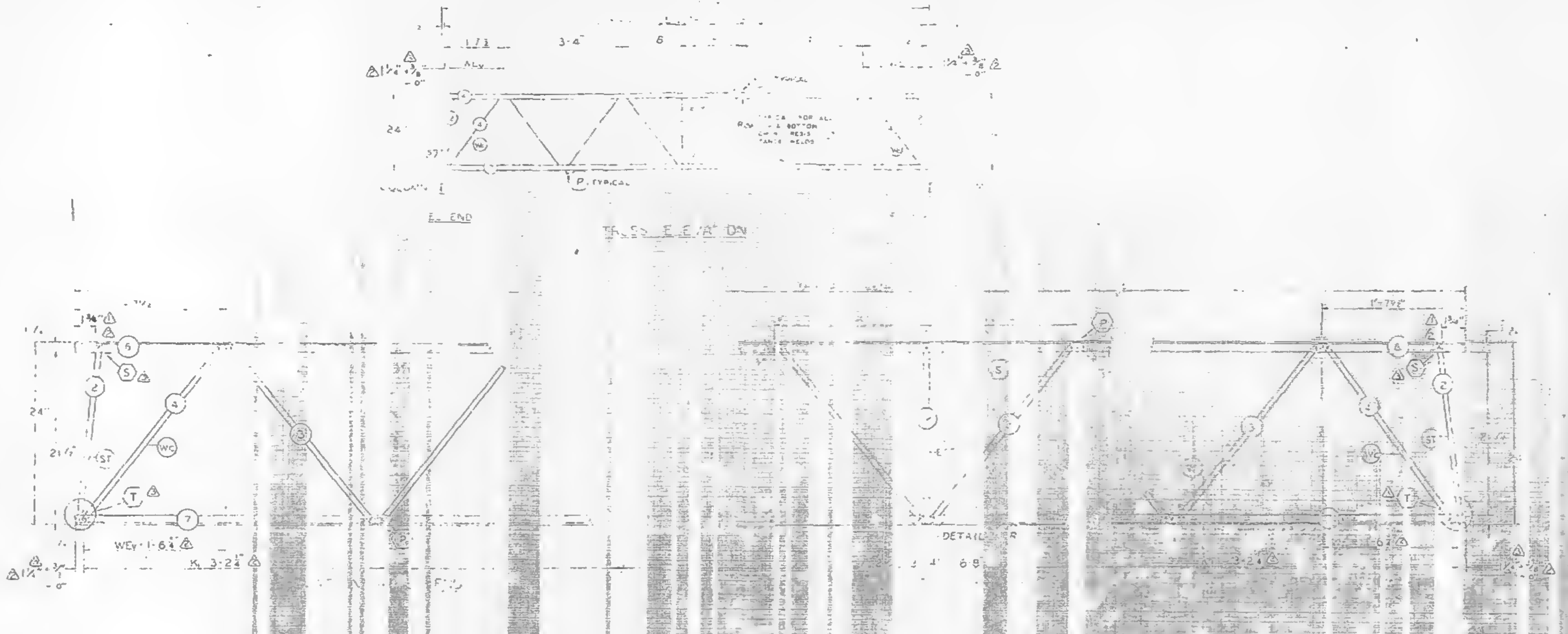
DESIGNATION	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	[illegible]	A242	[illegible]	13'-3"	[illegible]	[illegible]	1½x1¼	13'-3"	3	A242	.75	20-3⅞	2K 2K [illegible] 6-8 6-5	12	A242	.75	[illegible]	1

INCLINED

TRUSS DESIGNATION	MK	TYPE STEEL	DIA	LENGTH
24T13-133	[illegible]	A242	[illegible]	[illegible]

INCLINED
~~VERTICAL~~

TRUSS DESIGNATION	MK	TYPE STEEL	CHORD SIZE	LENGTH	EV	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	MK V5 DIA	LENGTH	TYPE STEEL	MK V6 DIA	LENGTH
24T13-133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—



ALL PANEL POINTS RESISTANCE WELDED [illegible] ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES [illegible]
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST231.
LETTERS IN HEXAGON INDICATE WELD DETAIL (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM [R29].

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB				[illegible]
	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	
24T13A-133	5	A242	1¼×1¼×.230	13'-3"	[illegible]	A242	[illegible]	13'-3"	3	A242	.75	15'-4½"	[illegible]

Es END	TRUSS DESIGNATION	WEv	INCLINED END STRUT				WEB WEv				
		⚠2	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T13A 133	1'-6¼"	2	A242	.75	[illegible]	4	A242	[illegible]	.75	2'-5½"

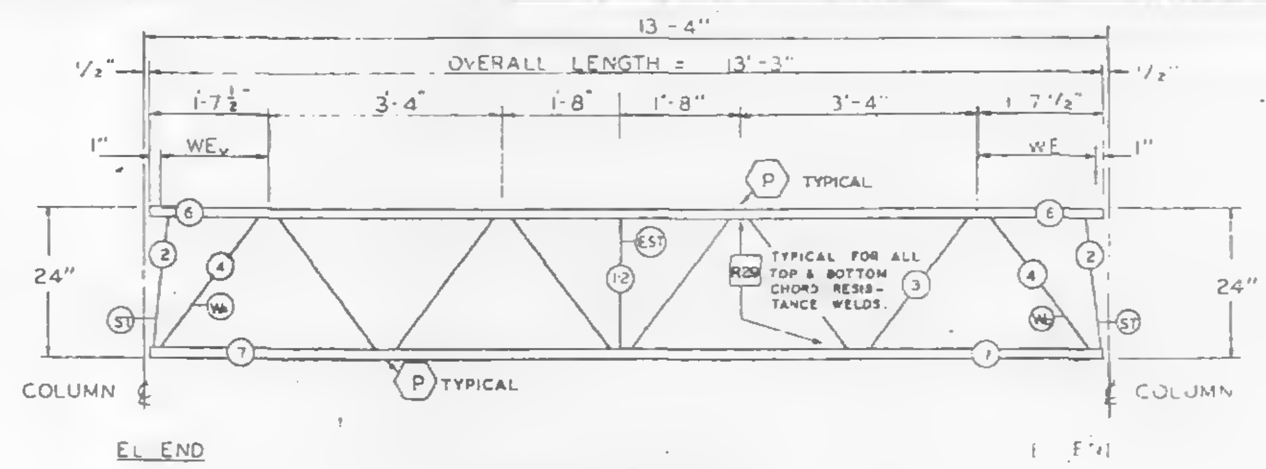
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL END STRUT				INCLINED END STRUT				STIFFENER					WEB WEv ⚠2				
		MK	TYPE STEEL	SIZE	LENGTH	⚠2	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	DIA	LENGTH	[illegible]	[illegible]	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T13A 133	–	–	–	—	1'-6¾"	–	–	–	—	2	A242	.75	1'-11¾"	–	–	—	—	—	4	A242	1	.75	2'-5½"

NO.	DATE	REVISION	BY
⚠3	9-25-68	AS NOTED	T.M.C.
⚠2	8-28-68	AS NOTED	T.M.C.
⚠1	4-25-68	END STRUT DIMENSIONS	T.M.C.

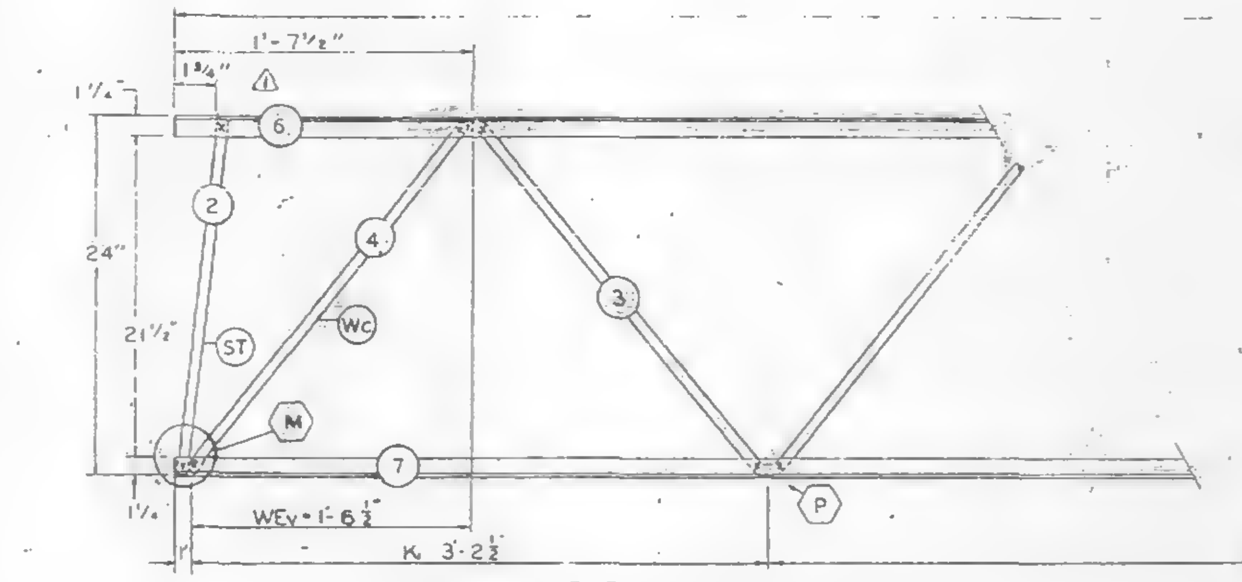
James White 9/4/68

221

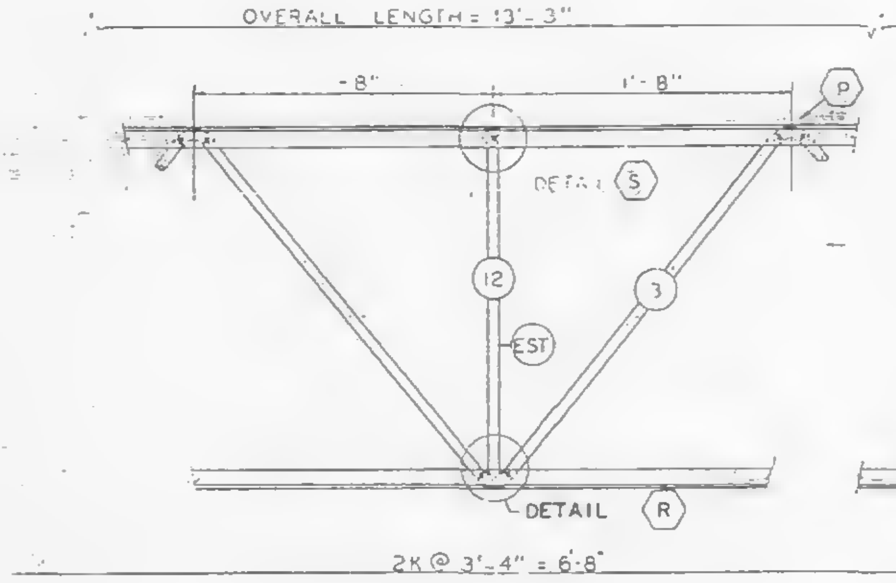
B12 A



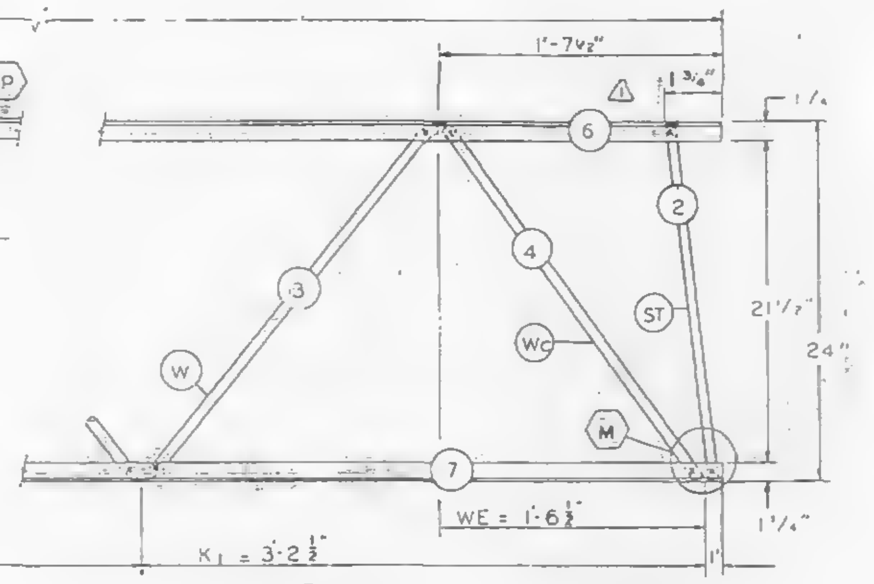
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT [illegible] STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES ([illegible]). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e. A. LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R29.

REF. DRWG.	
7-AB2-1	2-15-68
7-AB2-8	2-15-68
7-AB4-15.1	10-27-67
7-AB4-16, 18 & 19	1-3-68
7-AB4-28, 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13A -133	6	A242	1 1/2" x 1 1/4 x 230	13'-3"	7	A242	1 1/2 x 1 1/4 x 230	13'-3"	3	A242	.75	15'-4 1/2"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-10 1/8"	1

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13A -133	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13A -133	–	–	—	—	1'-6 1/2"	–	—	–	—	2	A242	.75	1'-11 1/2"	—	–	—	—	—	—	4	A242	1	.75	2'-5 1/2"

NO.	DATE	REVISIONS	BY
⚠1	4-25-68	END STRUT DIMENSIONS	T.M.C.

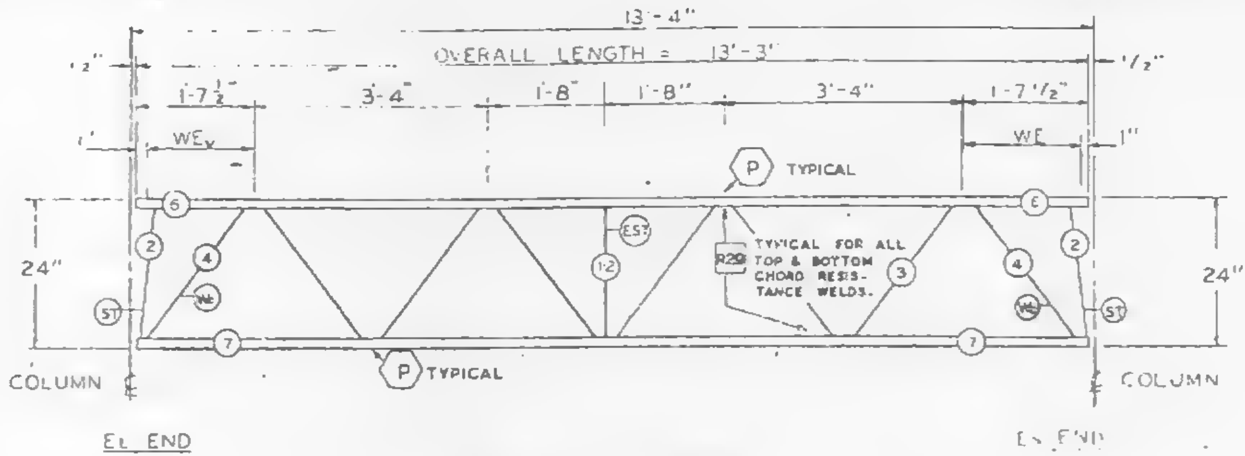
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13A x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

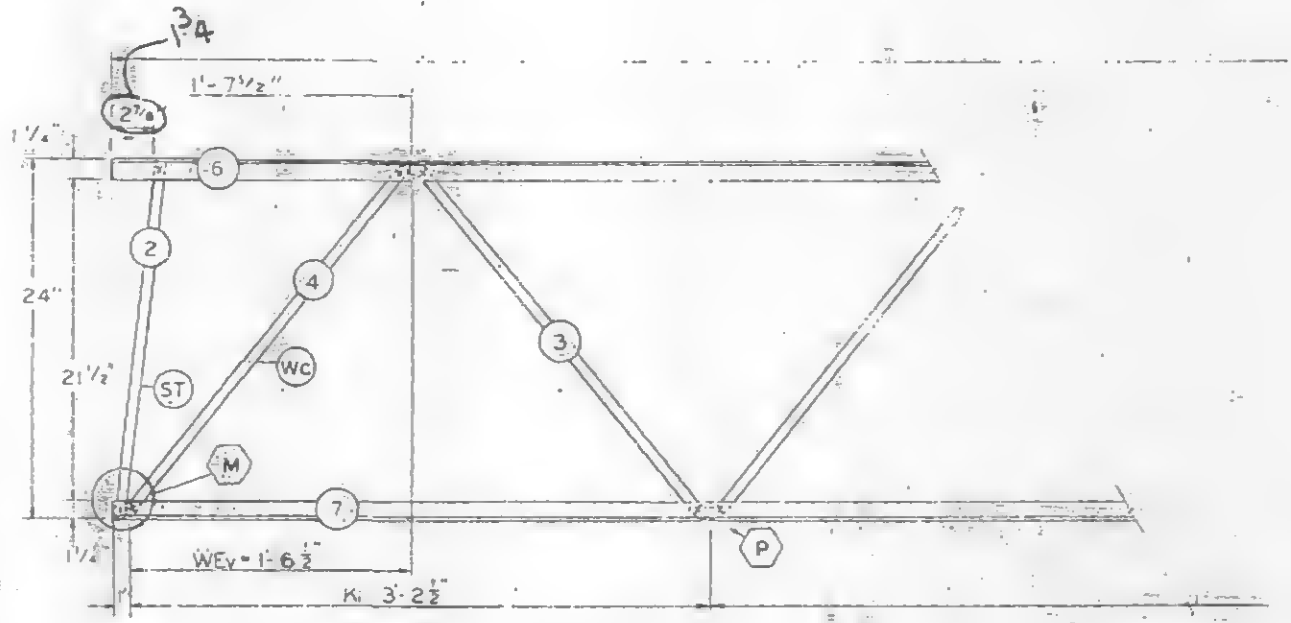
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-8	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 5/1/68	DRAWN BY [illegible] DATE FEB 24 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR LACLEDE STEEL CO.	DATE	CHECKED BY J.B. PAUL DATE FEB 24 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO BT213A

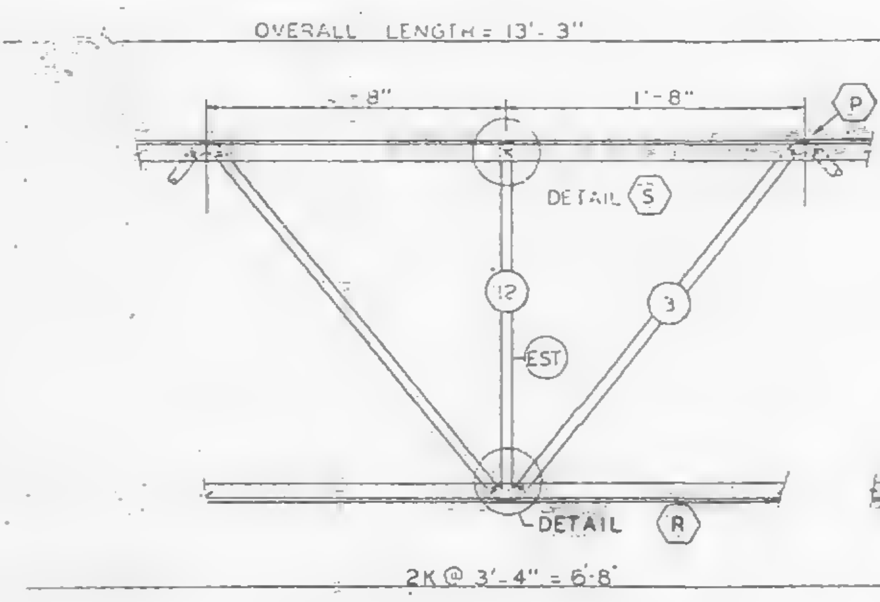
James White



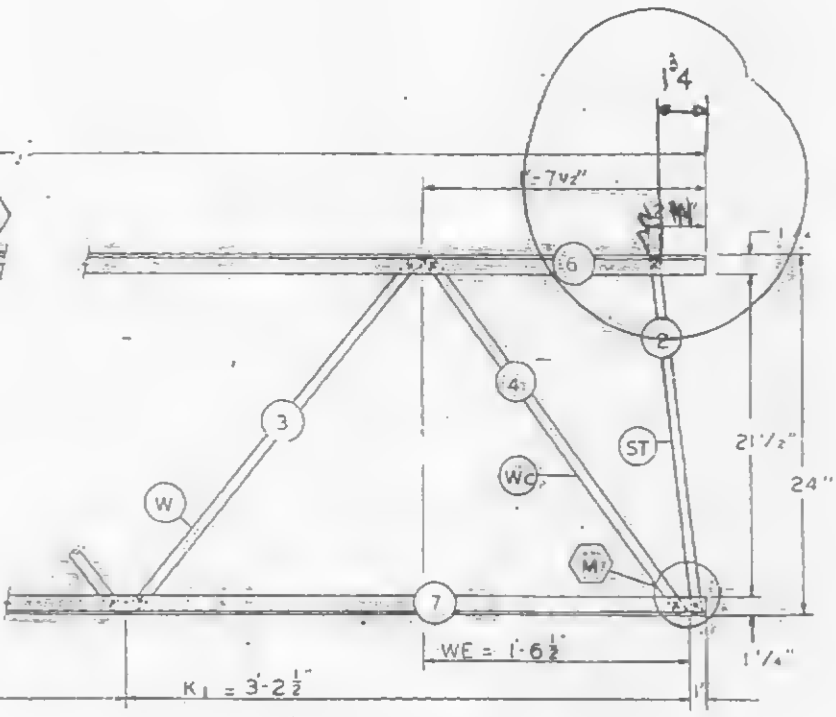
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▨). ALL WELD DETAILS SHOWN ON SHEETS ST29D AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. ⬡A. LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTRDL PROGRAM; ie., R29.

REF. DRWG.

7-AB2-1	2-15-68
7-AB2-8	2-15-68
7-AB4-15.1	10-27-67
7-AB4-16 18 & 19	1-3-68
7-AB4-28 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13A -133	5	A242	1 1/2" x 1 1/4 x 230	13'-3"	7	A242	1 1/2" x 1 1/4 x 230	13'-3"	3	A242	.75	15'-4 1/2"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-10 1/8"	1

ES END	TRUSS DESIGNATION	WE	INCLINED ST STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13A -133	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
															MK. VS			MK. VS							
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13A -133	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

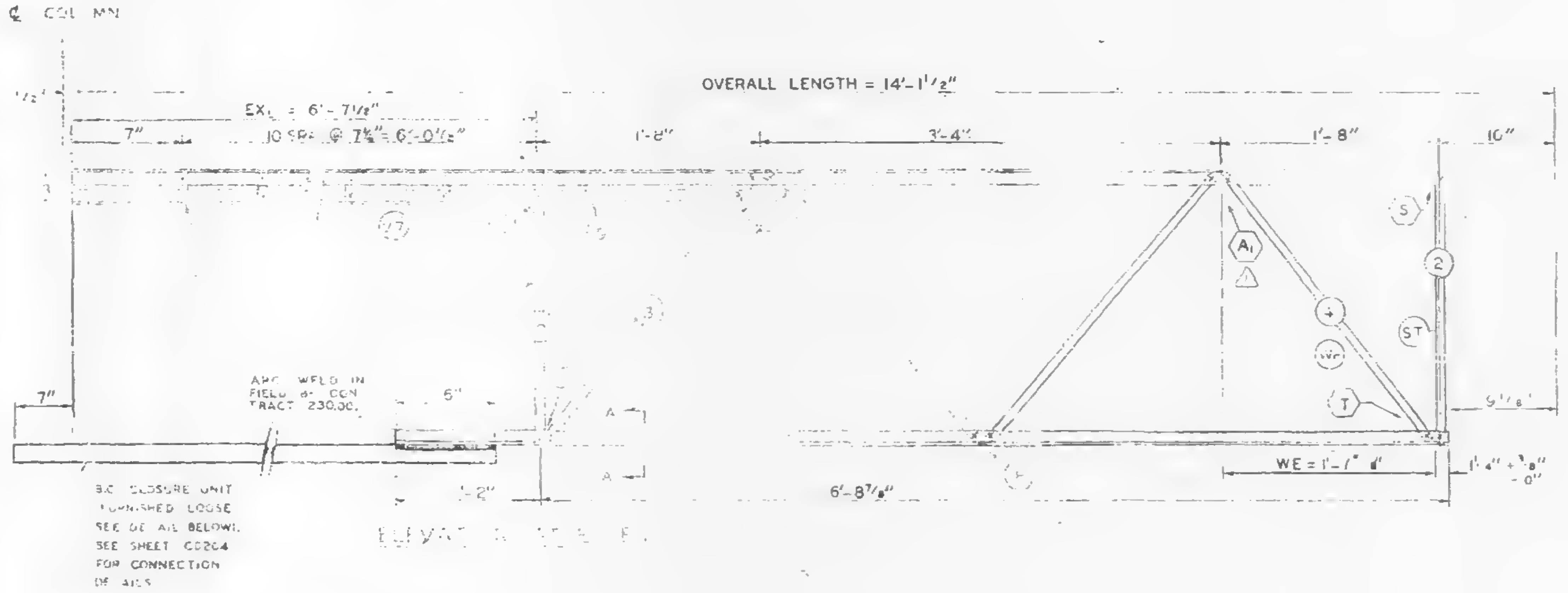
SKILLING HELLE
CHRISTIANSEN ROBERTSON
X
4/24/68 SK

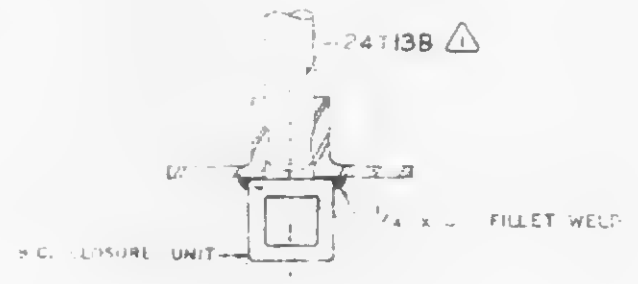
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13A x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATED BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO 7-AB2-8	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE	DRAWN BY Smith DATE FEB 24 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R.PAL DATE FEB 24 1968	IN CHARGE OF PROJ. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. ARBIR	FABRICATION CONT NO 221	SHEET NO BT213A





SECTION A-A

B.C. CLOSURE UNIT

FABRICAT

CAMBER AT MIDSPA
DESIGN DEPTH
PANEL
WEB DEPTH
OVERALL LENGTH

WELD DETAILS
S129 AND ST292

SEE SHEET CD204
DETAIL.
LETTERS IN HEXAGON
LETTERS AND NUMB
DISTANCE WELD
QUALITY CONTROL

MATERIAL LIST

B.C. CLOSURE UNIT

PCS	TYPE STEEL		LENGTH
1	A242	1¼ x	

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "ST" STRUT					TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH		MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T13B-1415	5	A242	1½"x1¼"x 230	14'-1½"	7	A242	1½"x1¼"x 230	7'-10⅞"	3	A242	.75	7'-8¼"	1½K @ 3'-4" = 5'-0"	-	-	—	-	- -		

Es END	TRUSS DESIGNATION	WE	VERTICAL "S" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	PCS	LENGTH
	24T13B-1415	1'-7⅝"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5¾"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK Y7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T13B-1415	9	A242	1½"x1¼"x230	8'-8"	6'-7½"	—	—	—	—	2	A242	.75	[illegible]	A242	.75	2⅞"	10

NO.	DATE	REVISION	BY
⚠1	2-25-69	AS NOTED	R.J.P.

BRIDGING TR

WORLD TRADE

THE PORT OF NE

BRIDGING TRUSS 24T13B x
WORLD TRADE CENTER TOWERS

FABRICATION BY LACLEDE STEE

FABRICATED AT MADISON, ILLINOIS

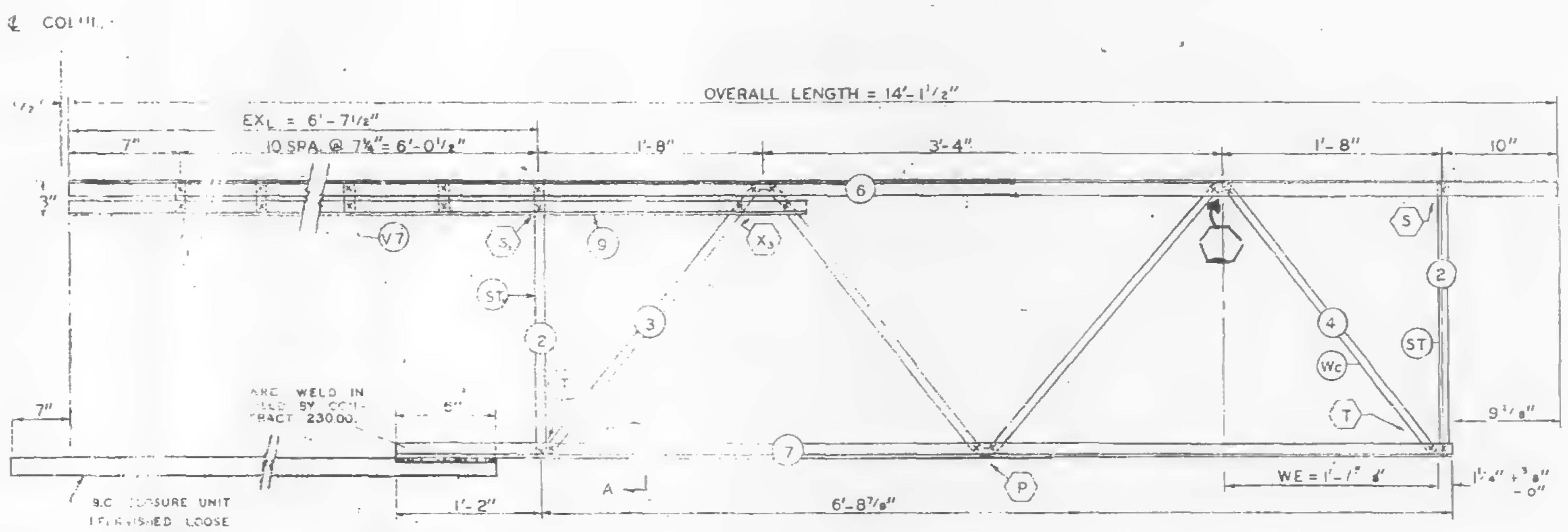
APPROVED FOR FABRICATION FOR PONYA James White
DATE

APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE

LACLEDE STEEL CO.

DETAILED BY

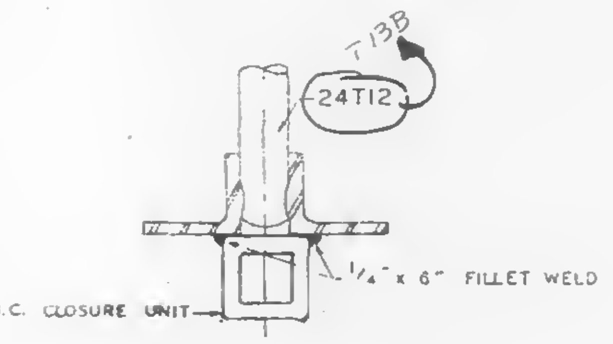
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	±⅛"
DESIGN DEPTH	24"	±¼"
PANEL "K"	3'-4"	±¼"
PANEL "X"	—	—
WEB DEPTH	23⅞"	±¼"
OVERALL LENGTH	14'-1½"	±⅛"



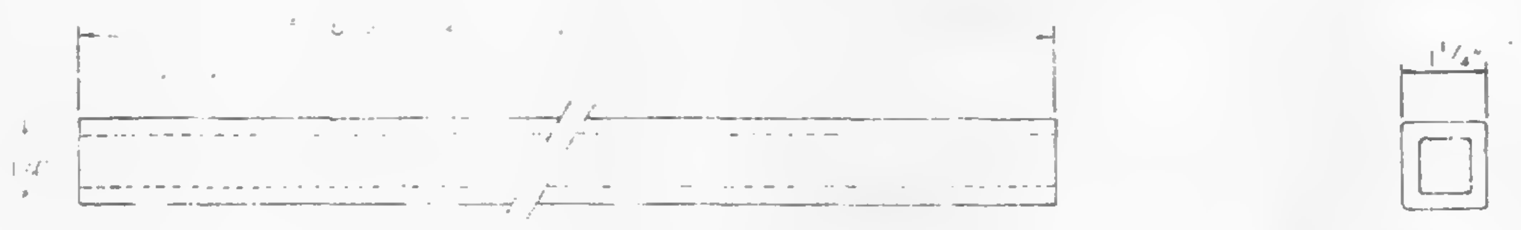
ELEVATION AT EL END

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (SHOP)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE UNIT DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A



ELEVATION

END VIEW

B.C. CLOSURE UNIT

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED.
☐ RESUBMIT
☐ REJECTED
2/10/69 SK

REF. DWG.
7-AB2-1 1-6-6
7-AB2-8 7-22-6
7-AB4-13.1 10-4-6
7-AB4-16 7-22-6
7-AB4-19 12-20-6
7-AB4-38 10-15-6

MATERIAL LIST FOR B.C. CLOSURE UNIT			
PCS.	TYPE STEEL	SIZE	LENGTH
1	A242	1¼ x .97 WALL	6' 6½"
		SQ TUBING	

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T13B-1415	6	A242	1½"x1¼"x.230"	14'-1½"	7	A242	1½"x1¼"x.230"	7'-10⅞"	3	A242	.75	7'-8¼"	1½K @ 3'-4" = 5'-0"	—	—	—	—	—		

ES END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T13B-1415	1'-7⅝"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5¾"

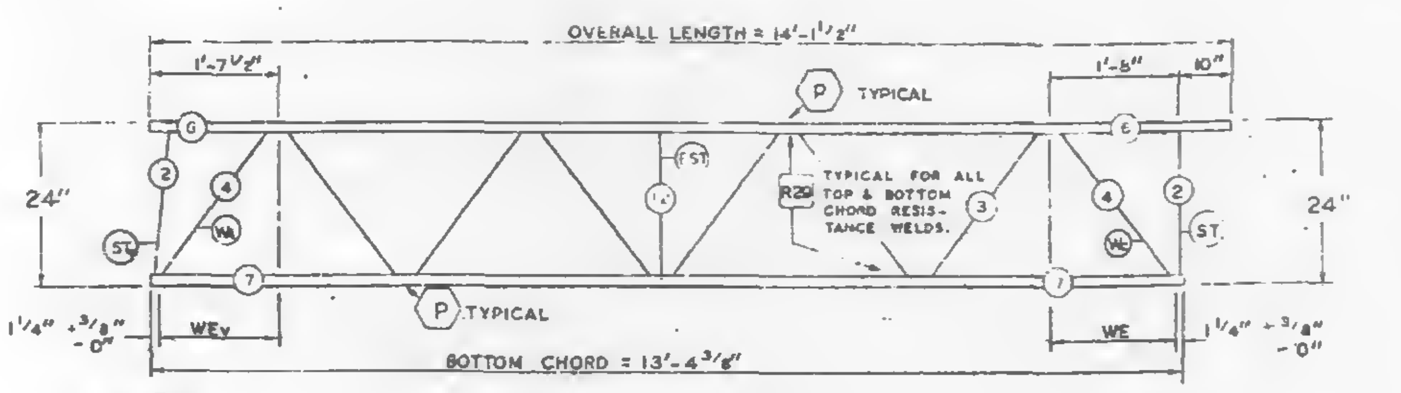
EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T138-1415	9	A242	1½x1¼x.230	8'-8"	8'-7½"	—	—	—	—	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

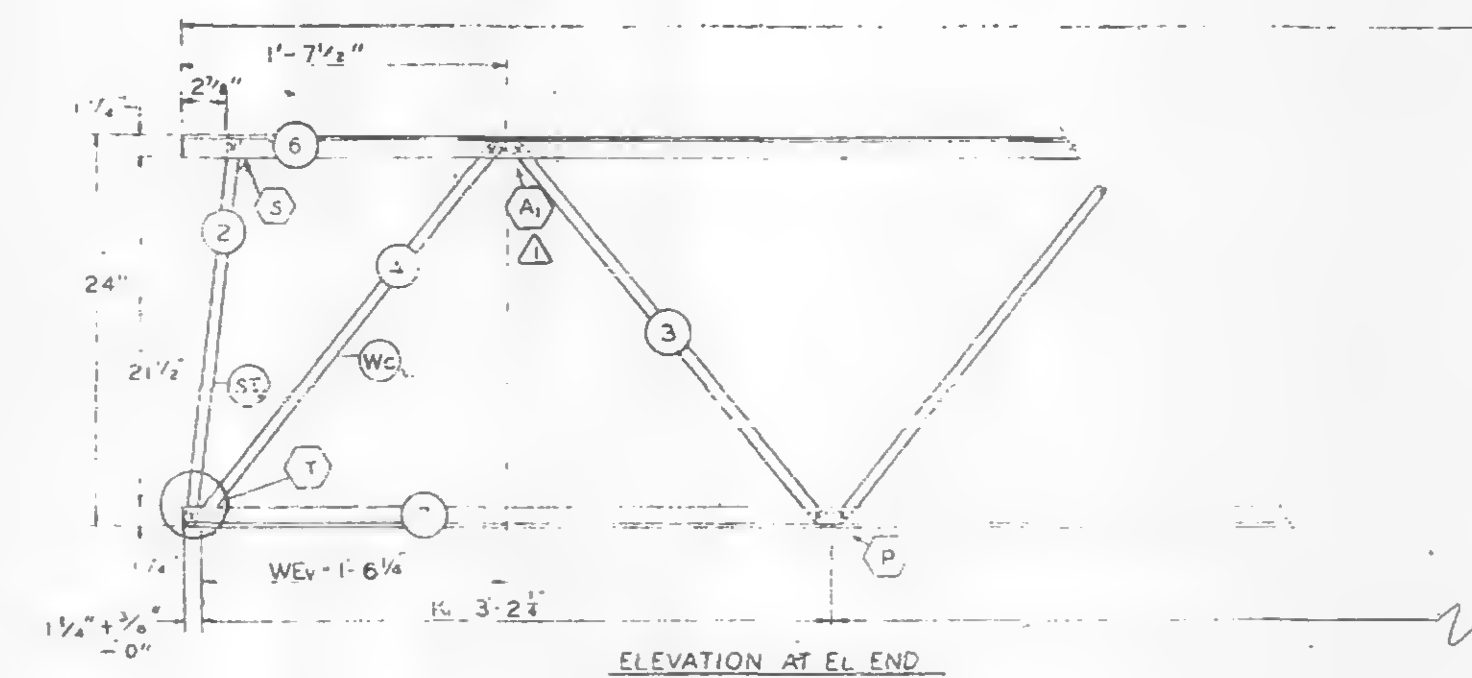
BRIDGING TRUSS 24T13B x 14'-1½" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A DATE
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DETAILED BY A C WEBER
DESIGN DRAWING NO. 7-AB21B
DRAWN BY
DATE JAN. 28, 1969
CHECKED BY T.R. CHURA
DATE JAN. 28, 1969
FABRICATION CONTRACT W.T.C. 221
PLATE
BT 213

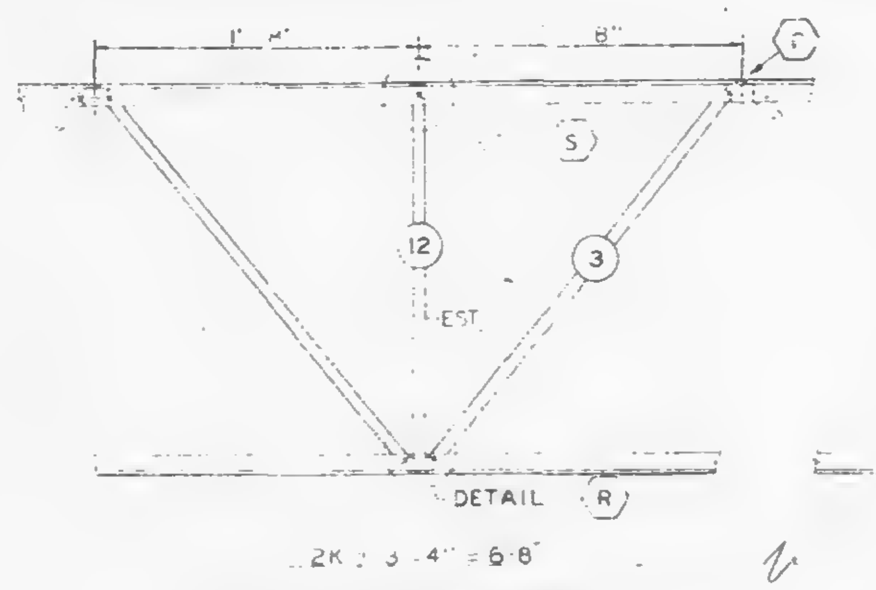


TRUSS ELEVATION

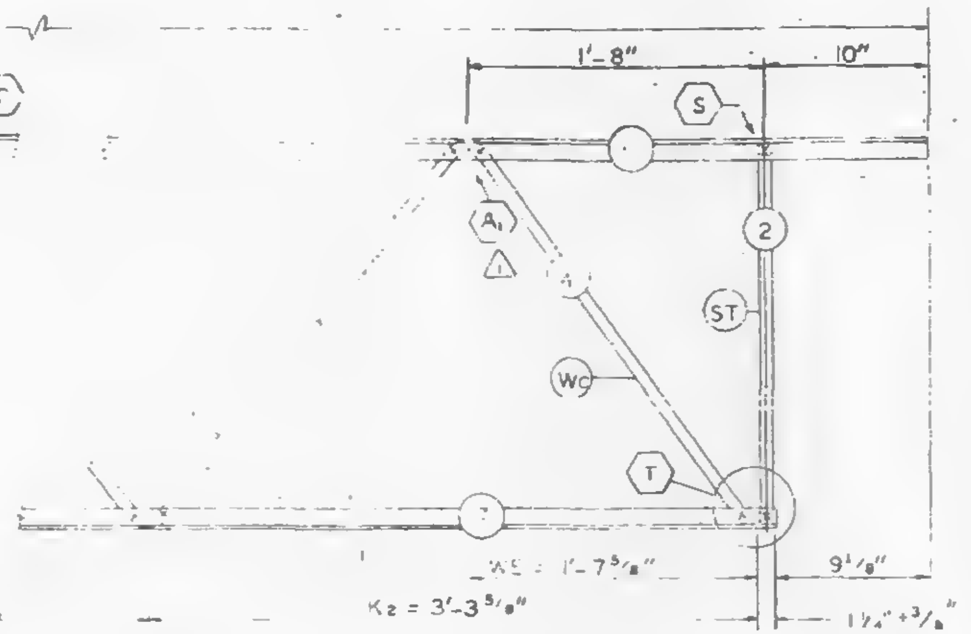
FABRICATION REQUIRMENT		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
PANEL "K2"	3'-3⅝"	± 1/4"
OVERALL LENGTH	14'-1½"	± 3/8"
WEB DEPTH	23⅞"	± 1/4"



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (X). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (IF ANY). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e. A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. R29.

REF. DRWG.
7-AB2-1 — -6-68
7-AB2-8 — 7-22-68
7-AB4-15 — 10-4-68
7-AB4-16 — 7-22-68
7-AB4-28 & 41 — 7-22-68
7-AB4-38 — 10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	[illegible]	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13C-1415	6	A242	1½ x 1¼ x 230	14'-1½"	7	A242	1½ x 1¼ x 230	13'-4⅜"	3	A242	.75	15'-4½"	3K@ 3'-4" = 10'-0"	12	A242	.75	1'-10⅞"	1

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	1'-7⅝"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5¼"

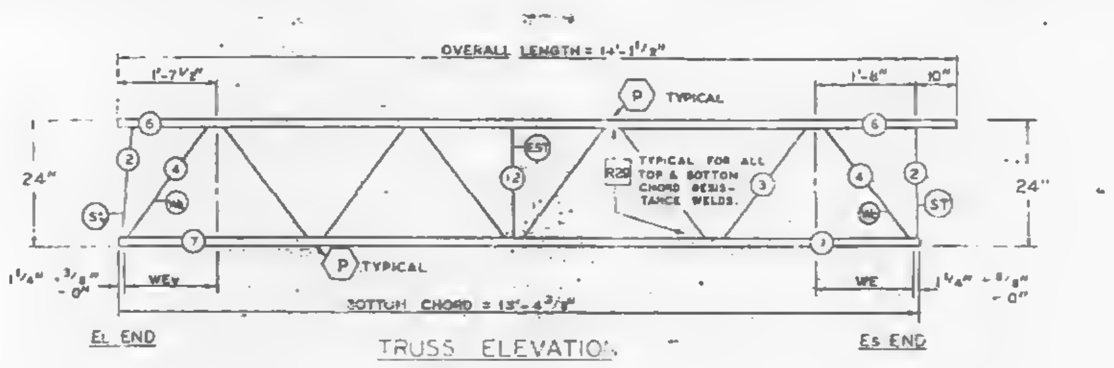
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER							WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	MK V5 DIA	LENGTH	TYPE STEEL	MK V6 DIA	LENGTH		MK	TYPE STEEL	PCS.	DIA	LENGTH
	24T13C-1415	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—		4	A242	1	.75	2'-5¼"

NO	DATE	REVISION	BY
1	2-25-69	WELD DETAIL A1	RJP

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.
FOR
THE PORT OF NEW YORK AUTHORITY

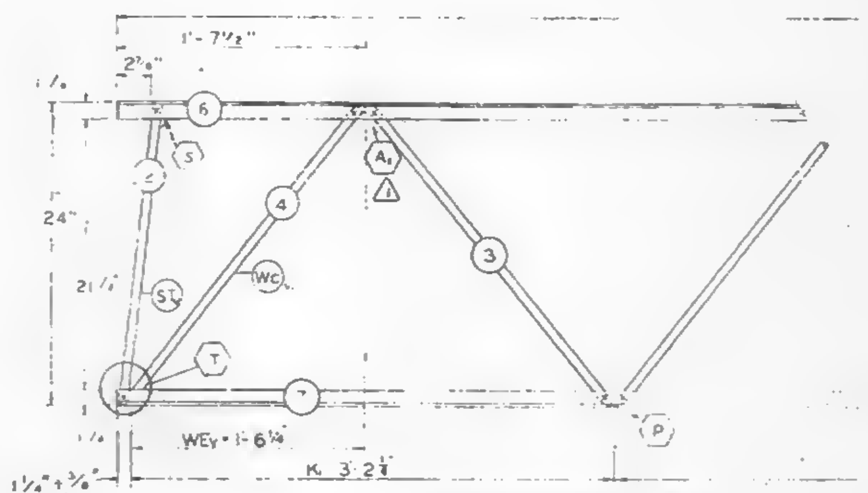
BRIDGING TRUSS 24T13C x 14'-1½" LONG
WORLD TRADE CENTER TOWERS A-B

LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-8
DRAWN BY [illegible] DATE JAN. 24, 1969
CHECKED BY J.B. CHUNG DATE JAN. 24, 1969
DETAILED BY J.A.G. AUBER
FABRICATION CONT. NO W.T.C. 221
IN CHARGE
SHEET NO ST213C

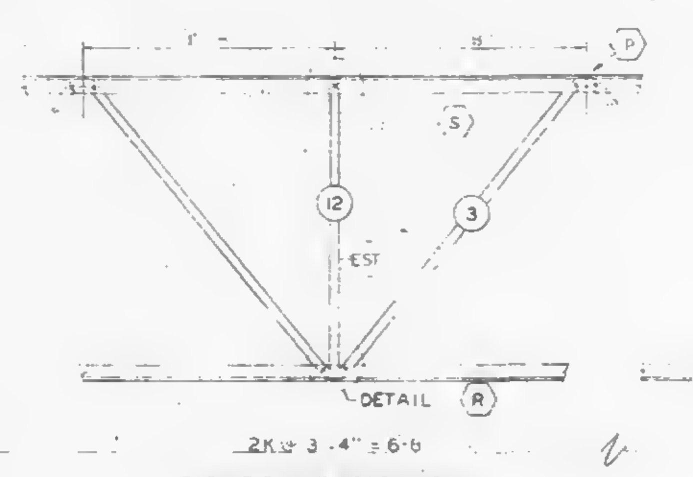


TRUSS ELEVATION

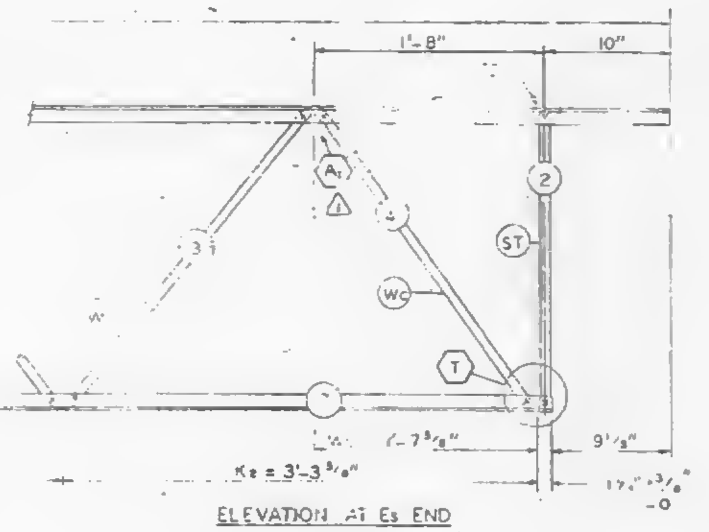
FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
PANEL "K2"	3'-3⅝"	± 1/4"
OVERALL LENGTH	14-1½"	± 3/8"
WEB DEPTH	23⅞"	± 1/4"



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (X). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e. Ⓐ.

LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. R29.

REF DRWG.	
7-AB2-1	1-6-68
7-AB2-8	7-22-68
7-AB4-15.1	10-4-68
7-AB4-15	7-22-68
7-AB4-28 & 41	7-22-68
7-AB4-38	10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				WEB						VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	[illegible]	[illegible]	MK	TYPE STEEL	DIA	LENGTH	
24T13C-1415	5	A242	1½ × 1¼ × .230	14'-1½"	7	A242	1¼ × 1¼ × .230	13'-4⅞"	3	A242	.75	15'-4½"	3K = 3'-4" = 10'-0"		12	A242	.75	1'-10⅞"	1

Es END	TRUSS DESIGNATION	WL	VERTICAL ST STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	1'-7⅝"	2	A242	.75	1'-11⅜"	4	A242	1	.75	2'-5¼"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEV	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER								WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5	TYPE STEEL	DIA	LENGTH	MK V6	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11½"		—	—	—		—	—	—	4	A242	1	.75	2'-5¼"

NO	DATE	REVISION	BY
2	3-18-69	AS NOTED	G.D.C.
1	2-25-69	WELD DETAIL A1	R.J.P.

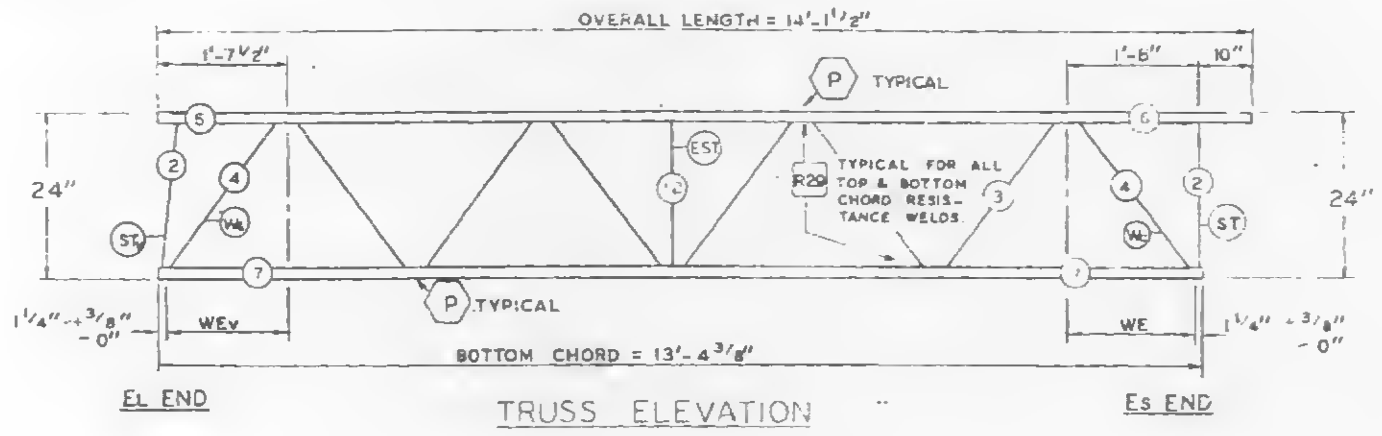
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13C x 14'-1½" LONG
WORLD TRADE CENTER TOWERS A-B

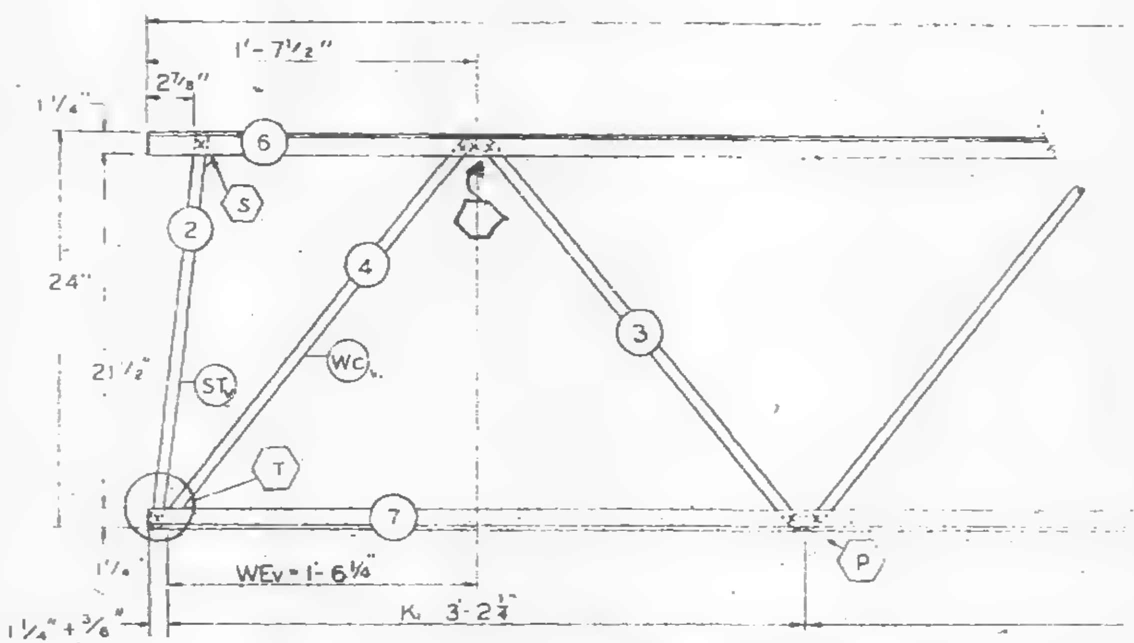
FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION FOR CONTRA James White DATE 3/24/69
APPROVED FOR FABRICATION DATE
LACLEDE STEEL CO.

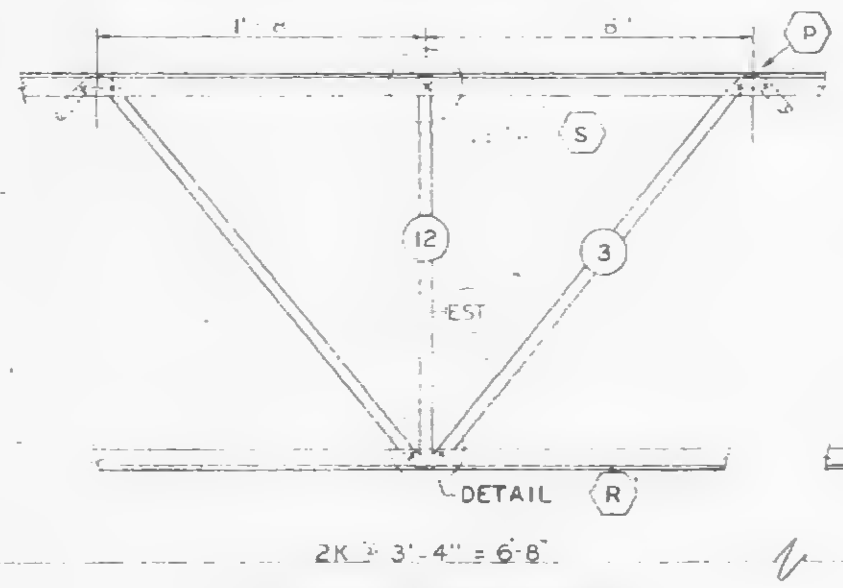
DESIGN DRAWING NO 7-AB2-8
DRAWN BY L.R. DATE JAN 24, 1969
CHECKED BY T.M. CHURA DATE JAN. 24, 1969
FABRICATION CONT NO WTC 221
SHEET NO. BT213C



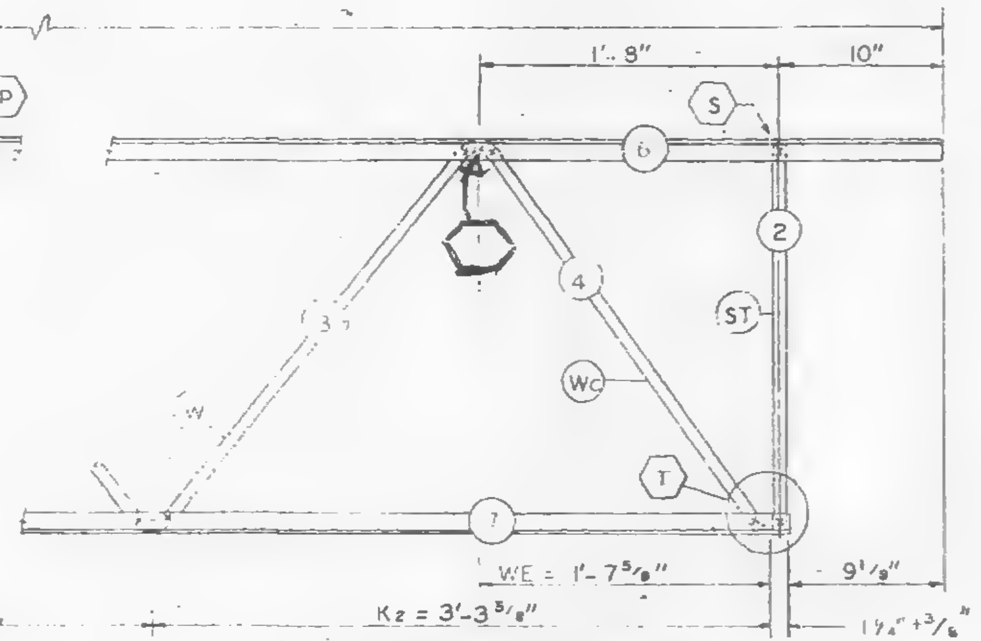
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT ES END

FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
PANEL "K2"	3'-3⅝"	± 1/4"
OVERALL LENGTH	14'-1½"	± 3/8"
WEB DEPTH	23⅞"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED (X). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e., ⟨A⟩.

LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R29.

SKILLING, HELLE CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
☐ REJECTED
Date 2/10/69 by SK

REF. DRWG.

7-AB2-1	1-6-68
7-AB2-8	7-22-68
7-AB4-15.1	10-4-68
7-AB4-16	7-22-68
7-AB4-28 & 41	7-22-68
7-AB4-38	10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO. OF K	MK	TYPE STEEL	DIA	LENGTH	
24T13C-1415	6	A242	1½ x 1¼ x 230	14'-1½"	7	A242	1½ x 1¼ x 230	13'-4⅜"	3	A242	.75	15'-4½"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-0⅞"	1

ES END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	1'-7⅝"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5¾"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEV	DIAGONAL "T" STRUT				INCLINED "STV" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "WCV"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.75	1'-11⅛"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO.	DATE	REVISION	BY

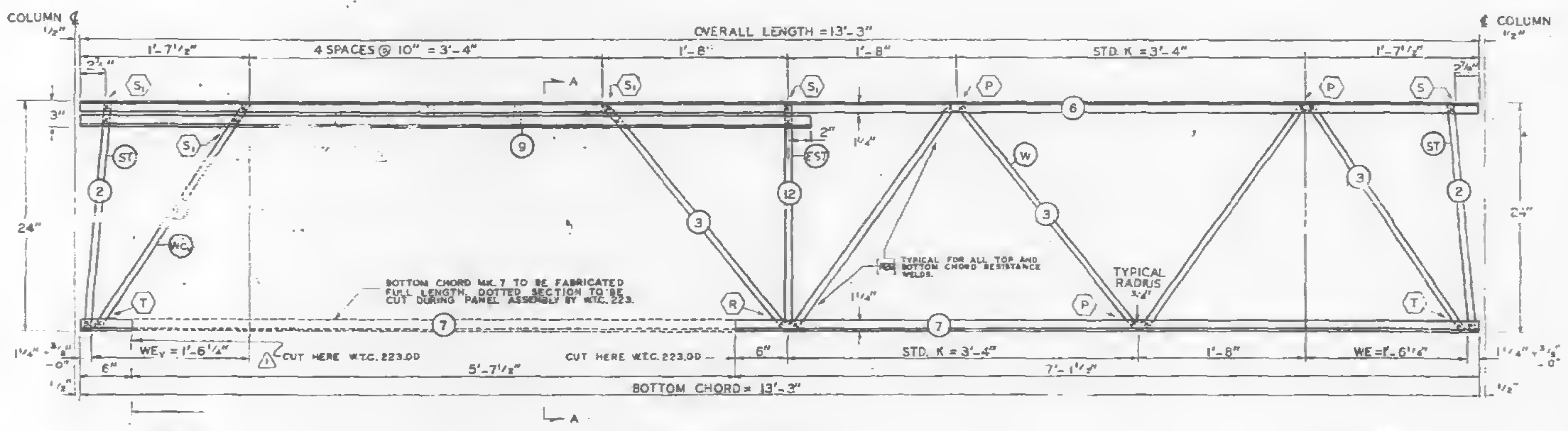
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13C x 14'-1½" LONG
WORLD TRADE CENTER TOWERS A-B

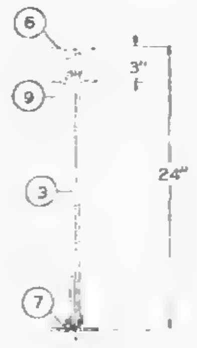
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY FOR PONYA DATE
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
LACLEDE STEEL CO.
DETAILED BY A.C. WEBER
DESIGN DRAWING NO 7-AB2-8 PLATE
DRAWN BY L.R. DATE JAN. 24, 1969
CHECKED BY T.M. CHURA DATE JAN. 24, 1969
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO W.T.C. 221
SHEET NO. BT213C

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+3 / 8"
DESIGN DEPTH	24"	±1 / 4"
PANEL "K"	3'-4"	±1 / 4"
WEB DEPTH	23 7/8"	±1 / 4"
OVERALL LENGTH	13'-3"	±3 / 8"

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (▨).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., (P).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291.
LETTERS & NUMBERS IN SQUARES INDICATE
RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM. ie., R29 .



TRUSS ELEVATION



SECTION A-A

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL EST STRUT				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T13D-133	6	A242	1½"x1¼"x.23"	13'-3"	7	A242	1¼"x1¼"x.23"	13'-3"	3	A242	.75	12'-8⅜"	2½K @ 3'-4" = 8'-4"	12	A242	.75	1	1'-10⅞"

Es END	TRUSS DESIGNATION	INCLINED ST STRUT				WE
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T13D-133	2	A242	.75	1'-11¾"	1'-6¼"

EL	TRUSS DESIGNATION	INCLINED ST STRUT				WEv	WEB "WCv"					BEARING ANGLES				END STIFFENER MK. Y7			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	PCS.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	PCS.
	24T13D-133	2	A242	.75	1'-11¾"	1'-6¼"	4	A242	.75	1	2'-5½"	9	A242	1¼"x1¼"x.23"	6'-9⅞"	A242	.75	2⅞"	3

1
REF. DWG.

7-A82-15	10-4-[illegible]
7-A82-1	10-4-[illegible]
7-A84-22	7-22-[illegible]
7-A84-28	7-22-68
7-A84-28.1	7-22-68
7-A84-17.4	10-[illegible]-68
SA-12A	10-11-68

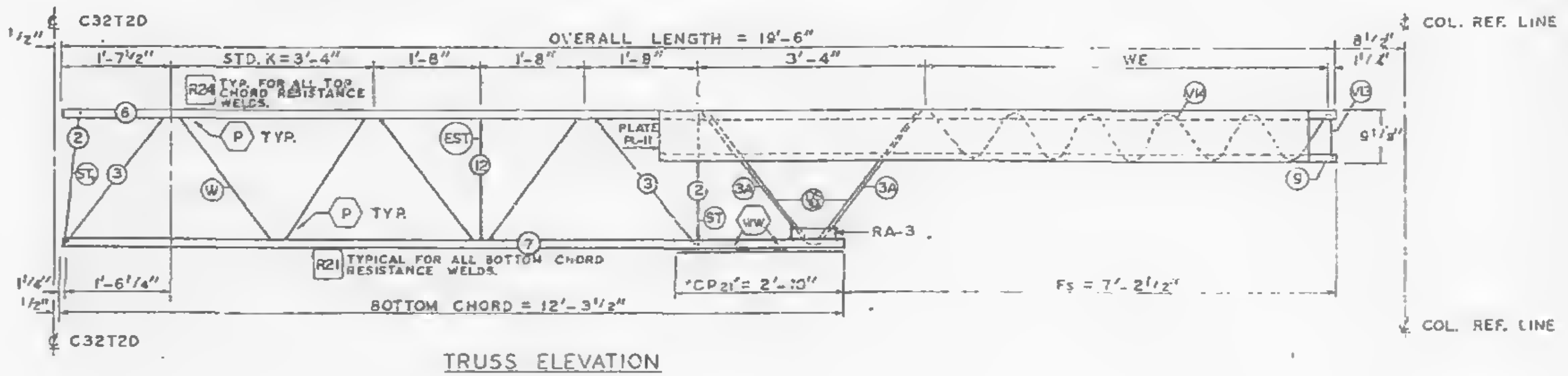
PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

NO.	DATE	REVISION	BY
1	10-24-68	(NOTE) "CUT HERE" (EL END)	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

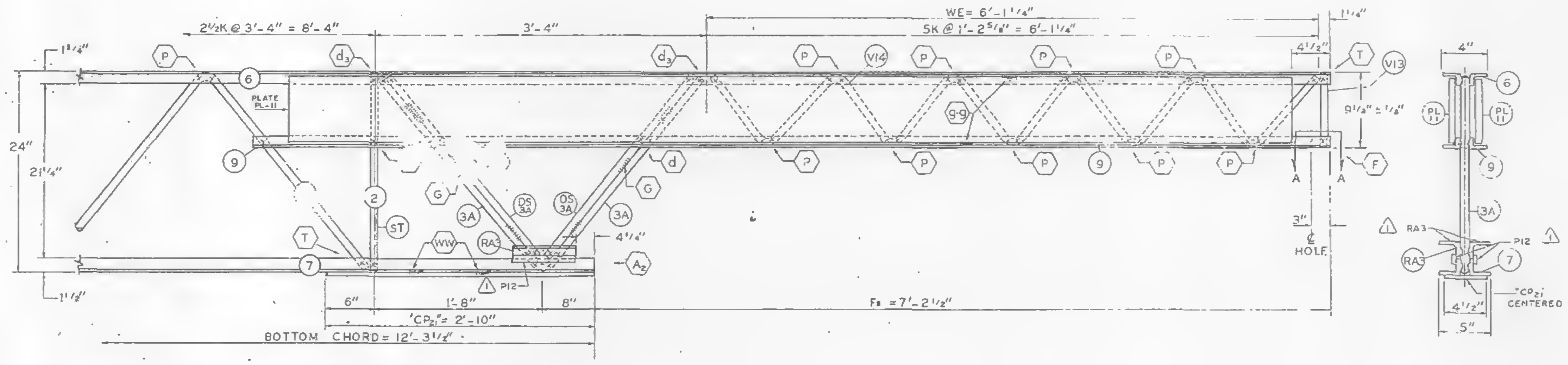
BRIDGING TRUSS 24T13D x 13'-3" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-15
PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A.
DATE 10/30/68
DRAWN BY: g.d.c.
DATE OCT. 15, 1968
APPROVED FOR FABRICATION BY. FOR FABRICATOR
DATE
CHECKED BY: T.N. CHURA
DATE OCT. 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 2[illegible]



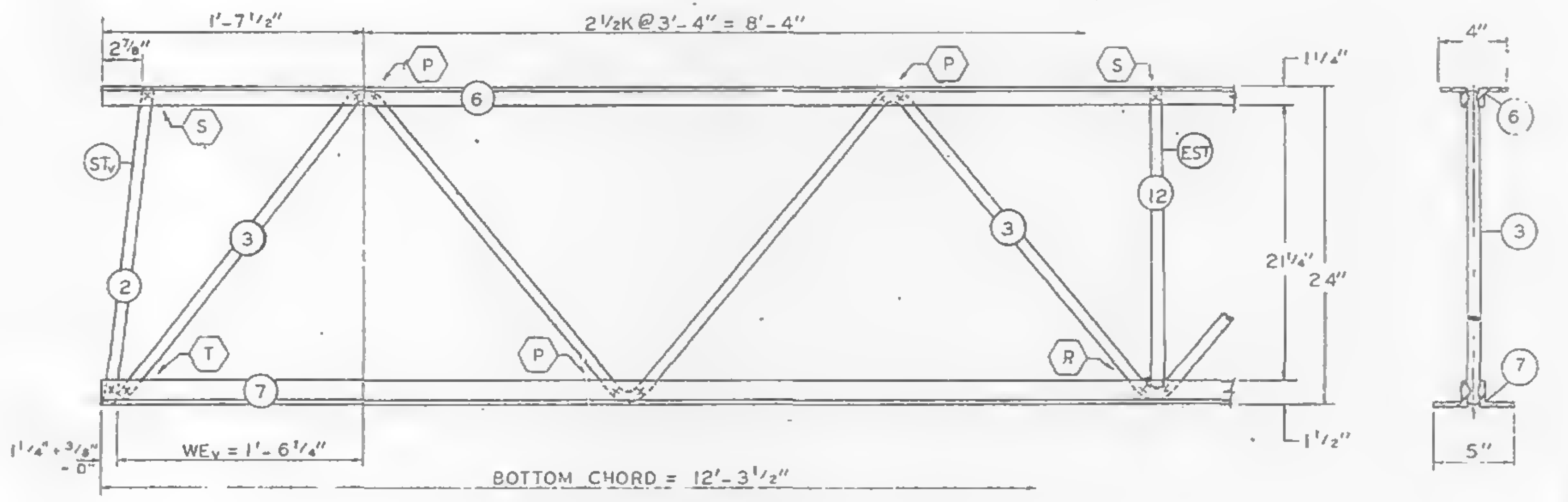
TRUSS ELEVATION

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"

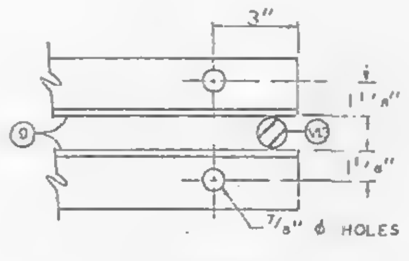


Es END (COLUMN)

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (IIIIII).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R21.
LETTERS IN HEXAGONS INDICATE WELD DETAILS. ie., P.
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, ST 293 & ST 294.
STIFFENER PL SHOWN ON SHEET ST 408.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283 & ST 284.



EL END (CORE)



SECTION A-A

REF. DRWG.		
	7-AB2-14	10-4-68
	7-AB1-55	10-15-68
	7-AB4-54	10-4-68
	7-AB4-58	10-4-68
	SA-124	10-11-68

PAINT
LACLEDE ELECTROCOAT
REQ. NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		REINFORCING ANGLES					SPECIAL PLATES				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH			MK.	PCS.	TYPE STEEL	ANGLE SIZE	LENGTH	MK.	PCS.	TYPE STEEL	SIZE	LENGTH
24T14A-196	6	A242	1½"x1¼"x.275"	19'-6"	7	A242	2"x1½"x.25"	12'-3½"	3 3A	A242 A242	.98 .98	15'-1½" 5'-1½"	3K @ 3'-4" = 10'-0" 1K @ 3'-4" = 3'-4"	12	A242	.98		1'-10⅞"			RA3	2	A242	2"x1½"x.25"	7½"	P12	2	A36	1"x⅜"	7½"

Es END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER						STIFFENER PLATE				
																			MK. V13			MK. V14							
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PLATE SIZE	LENGTH	PCS.
	24T14A-196	2	A242	.98	1'-11¾"	9	A242	1½"x1¼"x.275"	10'-9½"	6'-1¼"	DS 3A	A242	.98	2'-3¾"	CP 21	A36	4½x.39	2'-10"	A242	.98	9"	A242	.98	9'-3"	PL 11	A36	8"x.75"	10'-0"	2

EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T14A-196	2	A242	.98	1'-11¾"	1'-6¼"

NO.	DATE	REVISION	BY
1	12-26-68	AS NOTED	G.D.C.

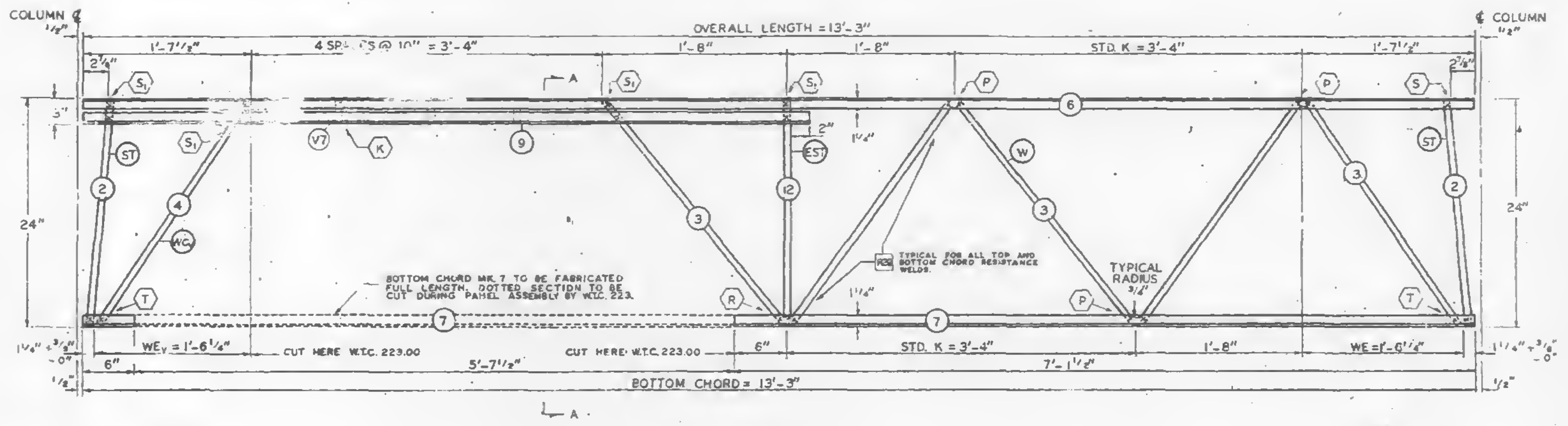
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14A x 19'-6" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

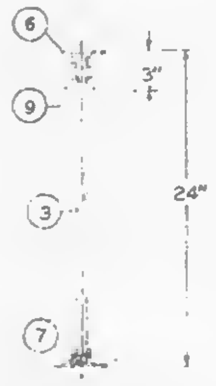
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A	DATE 1/20/69	DRAWN BY: gdc DATE OCT. 31, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 31, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO. W.T.C 221	SHEET NO. BT 214 A

FABRICATION REQUIREMENTS.		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+3/8"
DESIGN DEPTH	2¼"	±1/4"
PANEL "K"	3'-4"	±1/4"
WEB DEPTH	23 7/8"	±1/4"
OVERALL LENGTH	13'-3"	±3/8"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (▨).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie, ⟨P⟩.
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291.
LETTERS & NUMBERS IN SQUARES INDICATE
RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM. ie., R29 .



SECTION A-A

REF. DWG.		
	7-A82-15	8-1-68
	7-AB2-1	8-15-68
	7-A84-22	7-22-68
	7-A84-28	7-22-66
	7-A84-28.1	7-22-68
	7-A84-17.4	8-15-68
	SA-124	8-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL EST STRUT				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T130-133	6	A242	1½"x1¼"x.23"	13'-3"	7	A242	1½"x1¼"x.23"	13'-3"	3	A242	.75	12'-8⅜"	2½K @ 3'-4" = 8'-4"	12	A242	.75	1	1'-10⅞"

ES END	TRUSS DESIGNATION	INCLINED 'ST' STRUT				WE
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T130-133	2	A242	.75	1'-11¾"	1'-6¼"

EL END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WEᵥ	WEB Wcᵥ					BEARING ANGLES				END STIFFENER MK. V7			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	PCS.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	PCS.
	24T130-133	2	A242	.75	1'-11¾"	1'-6¼"	4	A242	.75	1	2'-5¼"	9	A242	1½"x1¼"x.23"	8'-9⅞"	A242	.75	2⅞"	3

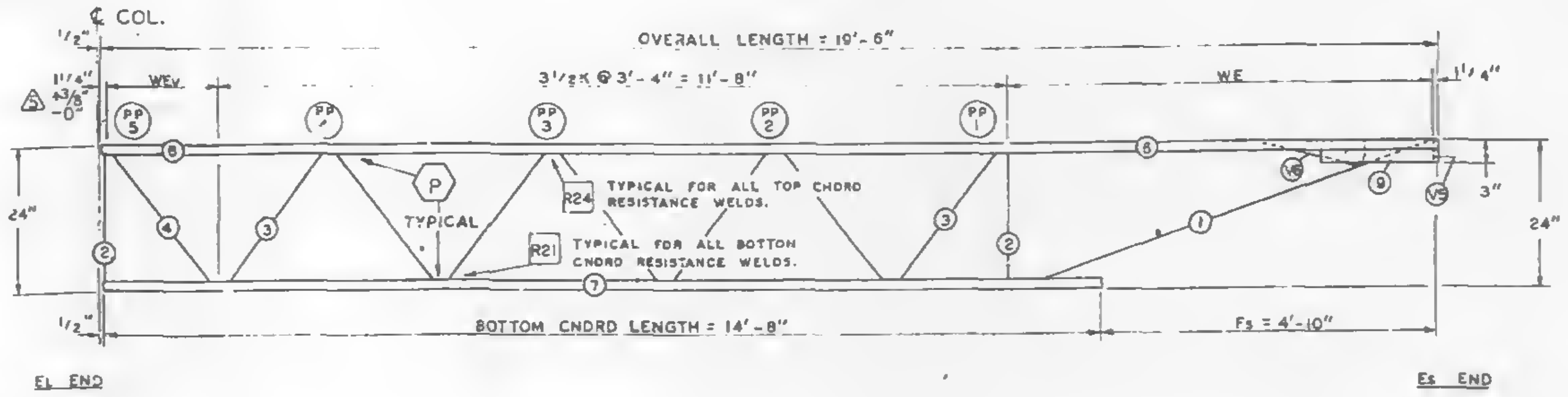
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13D x 13'-3" LONG
WORLD TRADE CENTER TOWERS A & B

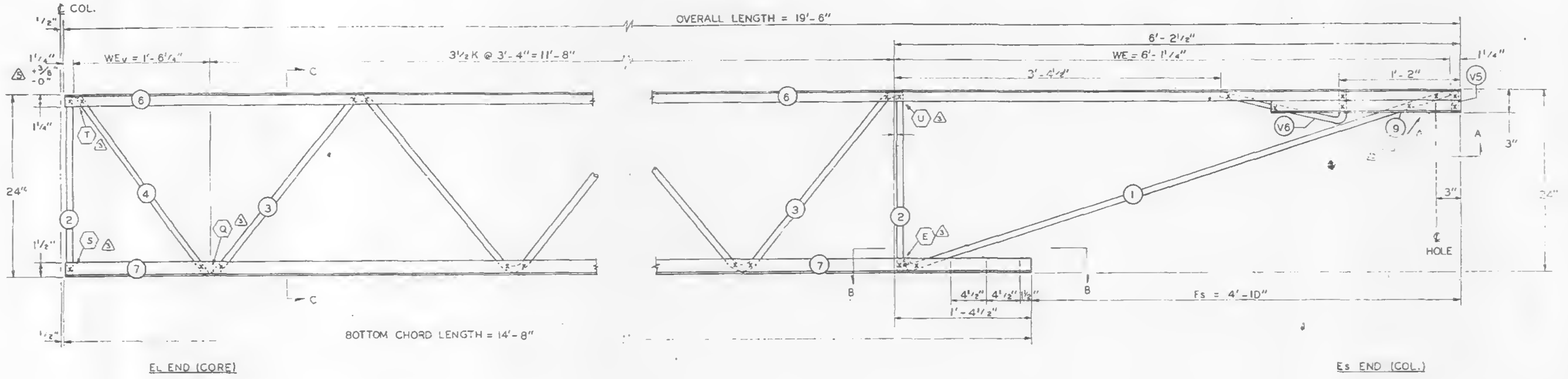
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A82-15	PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A.	DATE 10/23/68	DRAWN BY g.d.c. DATE OCT. 15, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE OCT. 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT 213 D

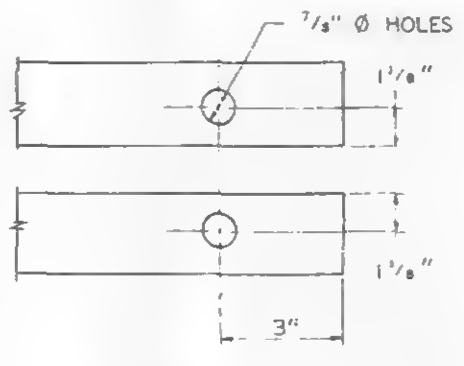


FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	—	—
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"

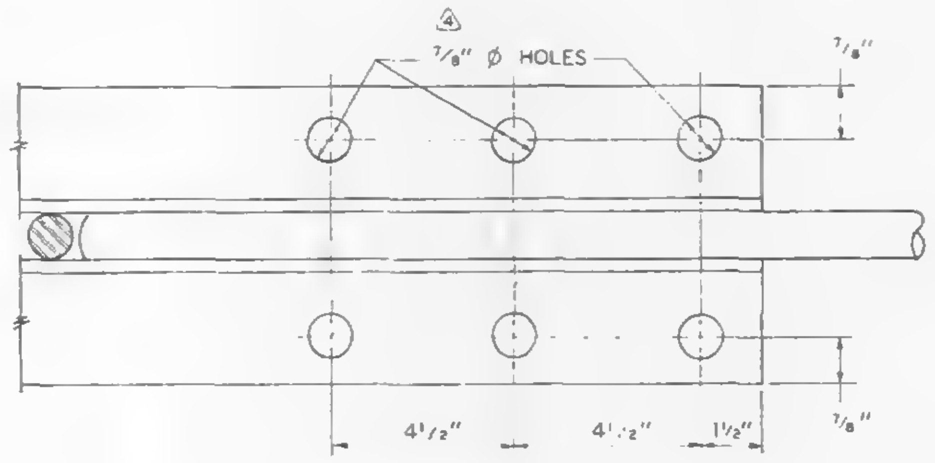
△6



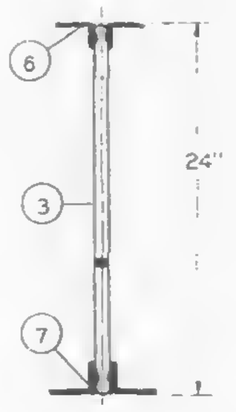
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-A82-1	4-1-68
7-A82-9	4-1-68
7-A84-15,1	1-3-68
7-A84-16 & 19	1-3-68
7-A84-28 & 41	1-3-68
7-A84-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 1DD01

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

△2

Es END	TRUSS DESIGNATION	W/E	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS1"				END STIFFENER						BEARING ANGLES			
															MK. V5			MK. V6						
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6'-2⅞"	—	—	—	—	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11⅜"	1'-6¼"	4	A242	1	.98	2'-5½" △2

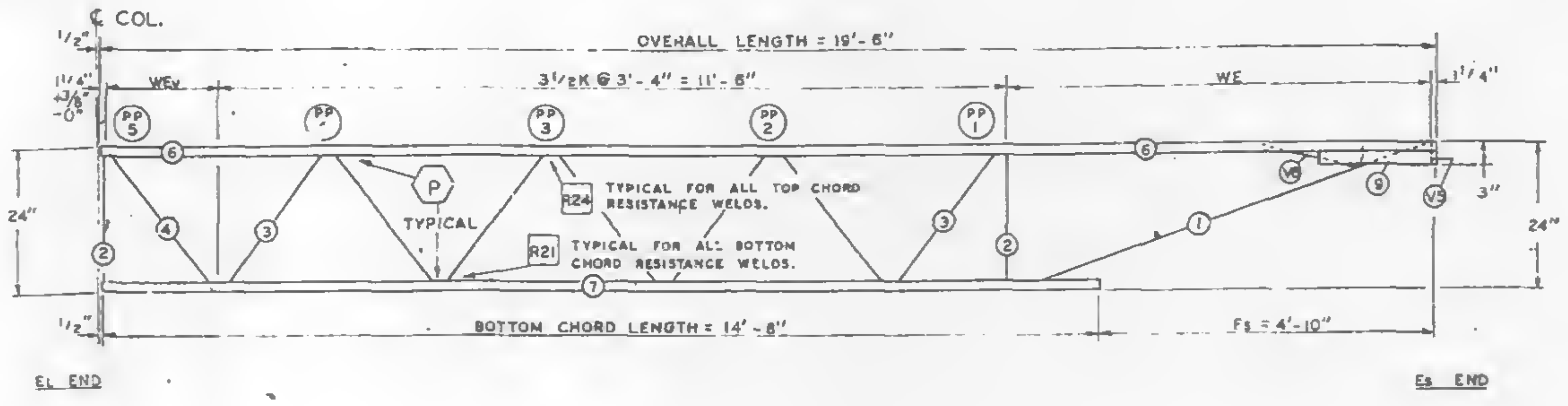
NO.	DATE	REVISION	BY
△6	6-27-69	TOLERANCES	G.D.C.
△5	9-6-68	END DIST. ②	T.M.G.
△4	7-17-68	HOLE SIZE - SECTION B-B	T.M.C.
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB, WT	T.M.C.
△1	6-26-68	GENERAL	T.M.C.

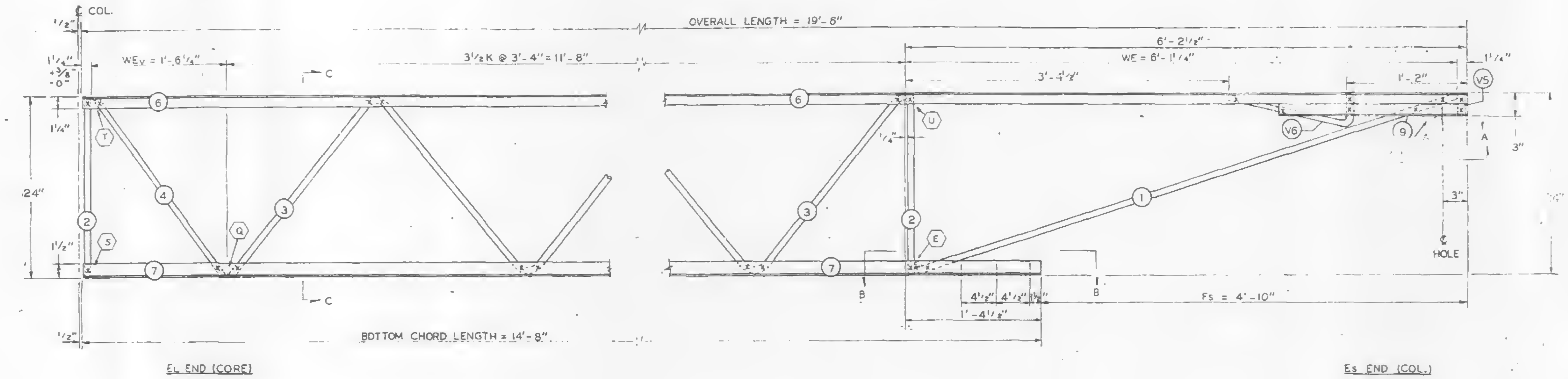
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A82-9	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE 7/2/69	DRAWN BY: [illegible] DATE APR. 20, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE APR. 20, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. BT 214


℄ COL.
OVERALL LENGTH = 19'-6"
3½K @ 3'-4" = 11'-8"
WEV
WE
TYPICAL
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R21 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
BOTTOM CHORD LENGTH = 14'-8"
Fs = 4'-10"
24"
3"
EL END
Es END

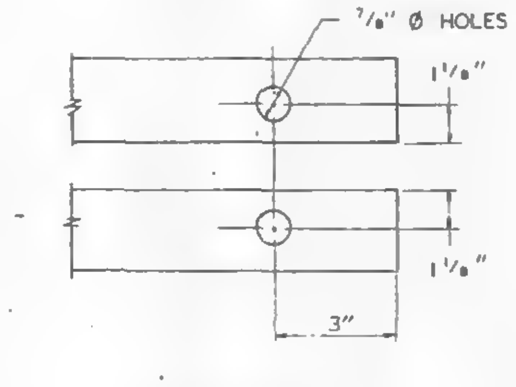


EL END (CORE)

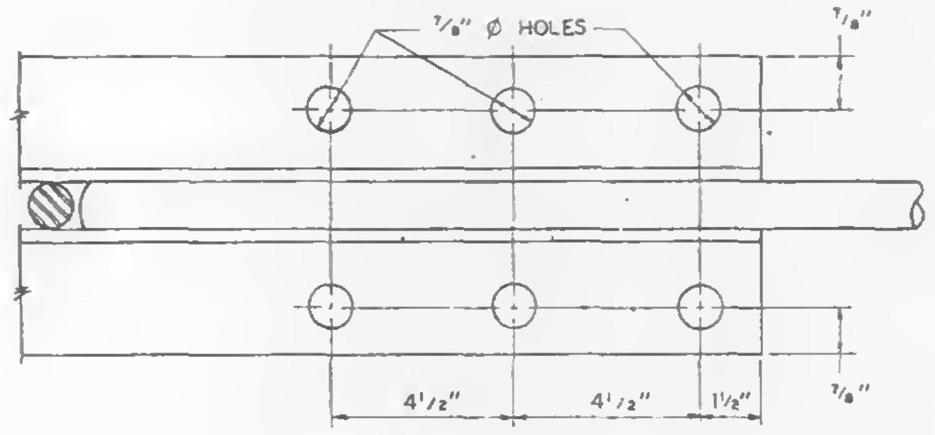
Es END (COL.)

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	—	—
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"

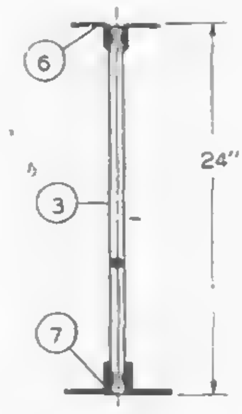
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (-).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	1-6-69
7-AB2-9	1-6-69
7-AB4-15.1	10-4-68
7-AB4-18	7-22-68
7-AB4-28	7-22-68
7-AB4-18	1-6-69

PAINT
LACLEDE ELECTROCOAT
RED NO. 1D001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14B-196	6	A242	1½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS1"				END STIFFENER						BEARING ANGLES			
															MK. V5			MK. V6						
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14B-196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	—	—	—	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEV	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14B-196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

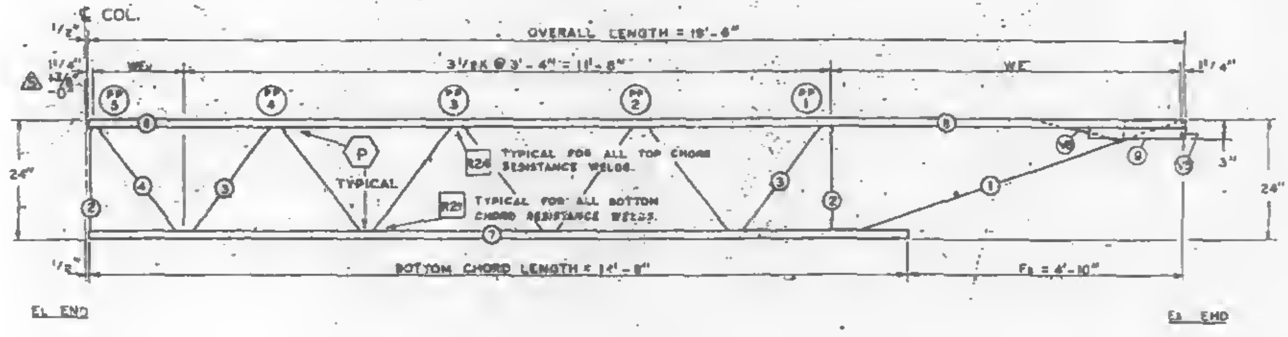
NO.	DATE	REVISION	BY
1	6-27-69	TOLERANCES	G.D.C

FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

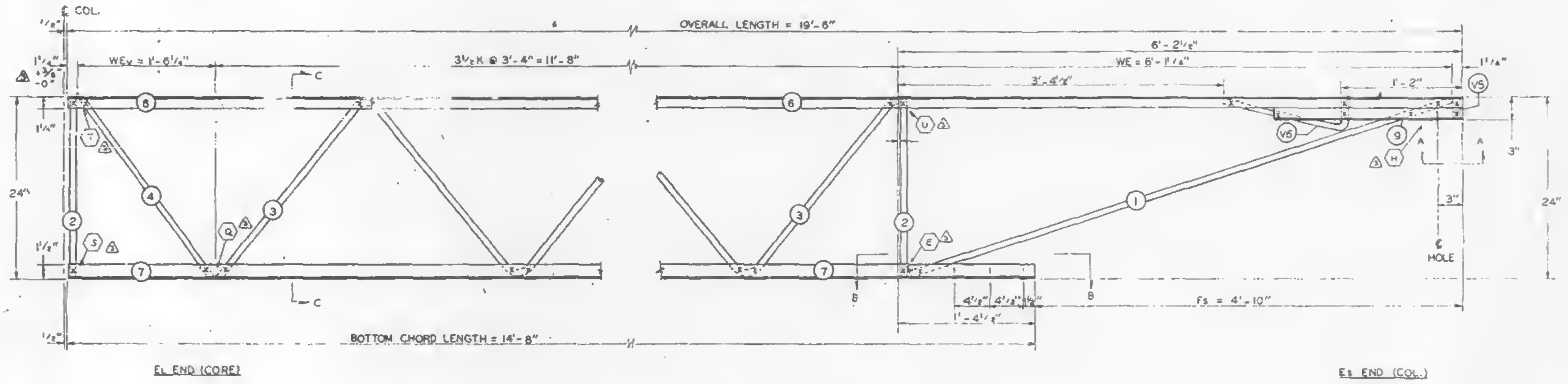
BRIDGING TRUSS 24T14B x 19'-6" LONG

FABRICATION BY . LACLEDE STEEL COMPANY

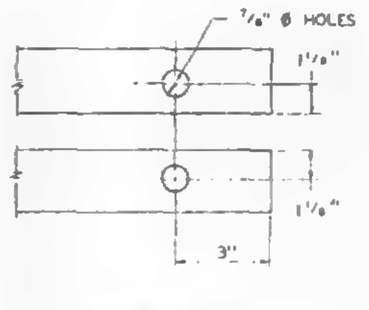
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-9	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE 7/2/69	DRAWN BY: DATE JAN. 20, 1969	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE JAN. 20, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. BT 214B


℄ COL.
OVERALL LENGTH = 19'-6"
WEv
3½K @ 3'-4" = 11'-8"
WE
1¼"
P
TYPICAL
R26 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R21 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
24"
3"
BOTTOM CHORD LENGTH = 14'-8"
Fs = 4'-10"
EL END
Es END

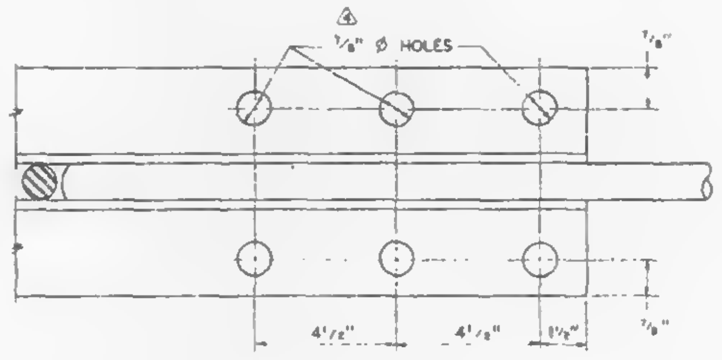
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	——	——
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-8"	+ 3/8"



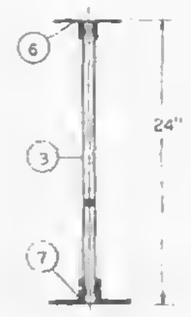
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▥).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-9	4-1-68
7-AB4-15,1	1-3-68
7-AB4-16 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-19 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1¼" x 1¼" x .275	19'-6"	7	A242	2" x 1½" x .25	14'-8"	3	A242	.98	17'-11½"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS1"				END STIFFENER MK. V5			END STIFFENER MK. V6			BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	——	—	——	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

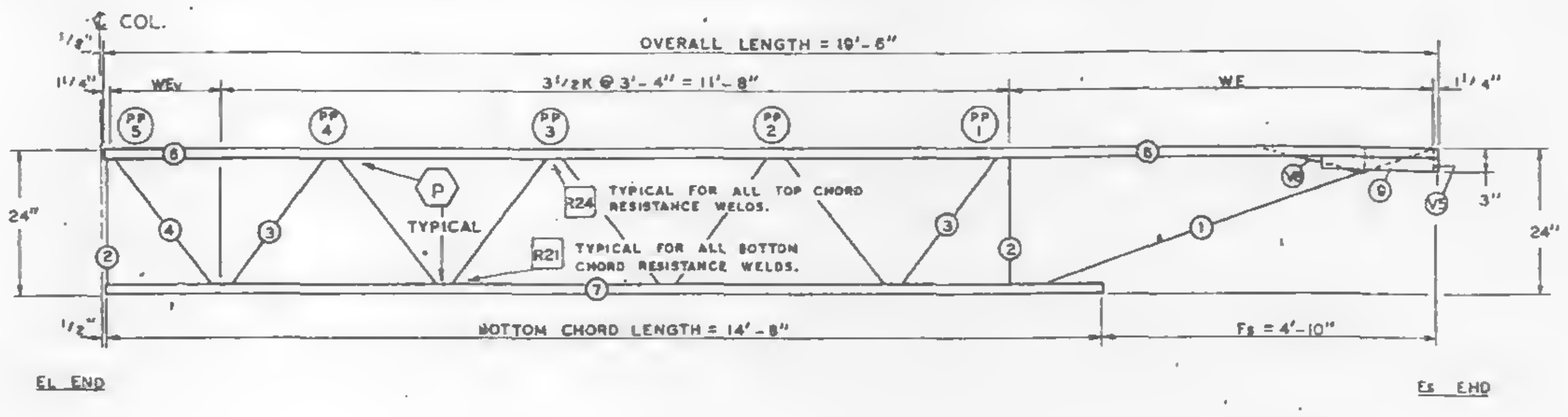
EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5⅛"

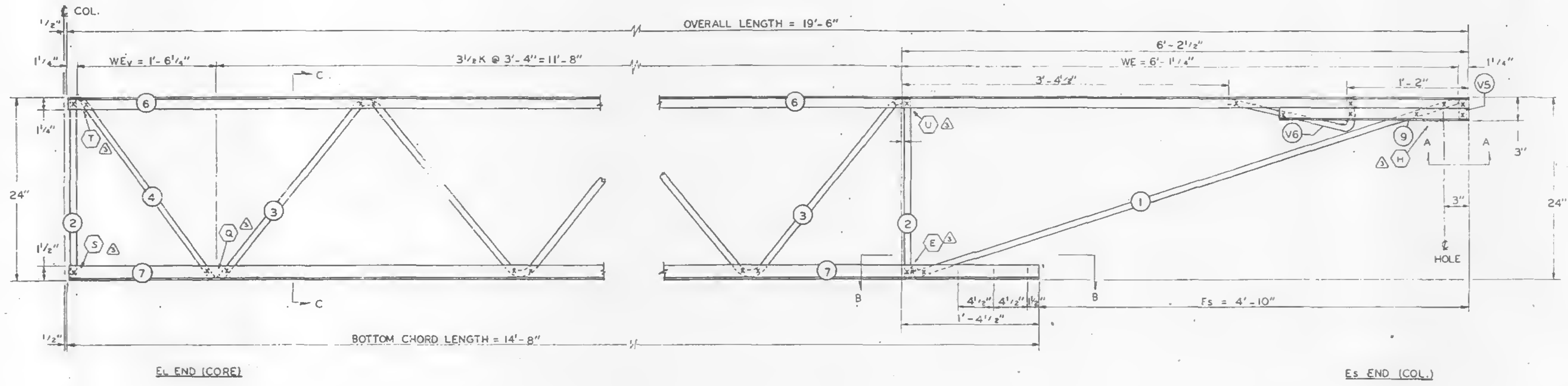
NO.	DATE	REVISION	BY
5	9-6-68	END DIST. ②	T.M.C.
4	7-17-68	HOLE SIZE - SECTION B-B	T.M.C.
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB, WT	T.M.C.
1	6-26-68	GENERAL	T.M.C.

FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

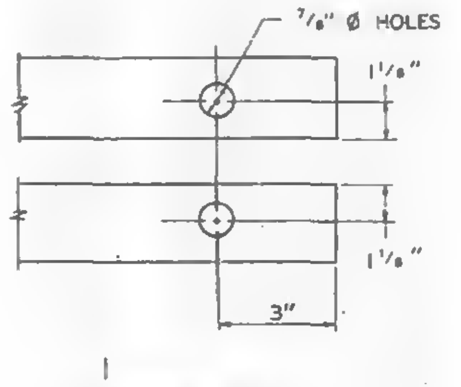
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-9
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 9/10/68
DRAWN BY
DATE APR. 20, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHUPA
DATE APR. 20, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO BT 214


℄ COL.
OVERALL LENGTH = 19'-6"
3½K @ 3'-4" = 11'-8"
WEv
WE
24"
3"
PP 5
PP 4
PP 3
PP 2
PP 1
P
TYPICAL
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R21 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
V5
V6
BOTTOM CHORD LENGTH = 14'-8"
Fs = 4'-10"
EL END
Es END

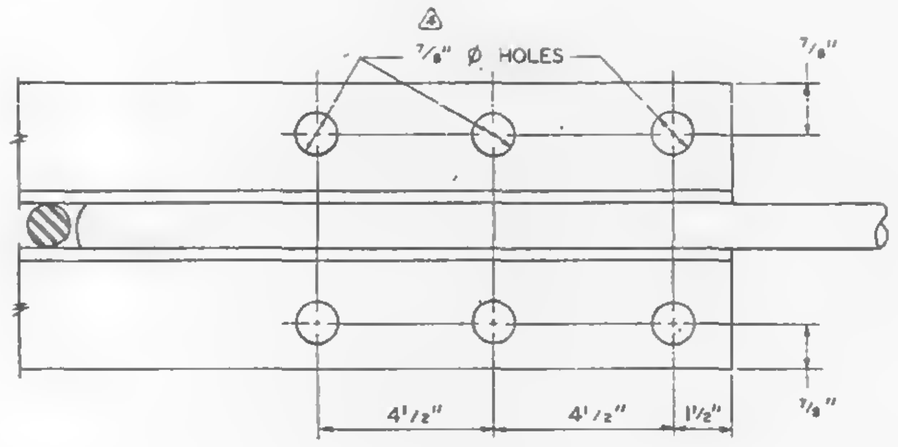


ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES ( ).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.

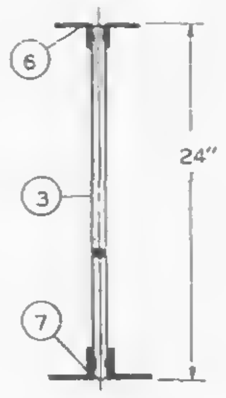
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	—	—
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-8"	+ 3/8"



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	4-1-66
7-AB2-9	4-1-68
7-AB4-15.1	1-3-68
7-AB4-16 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 1D001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x .275"	19'-5"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

Fs	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS,"				END STIFFENER						BEARING ANGLES			
															MK. V5			MK. V6						
	—		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	—	—	—	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

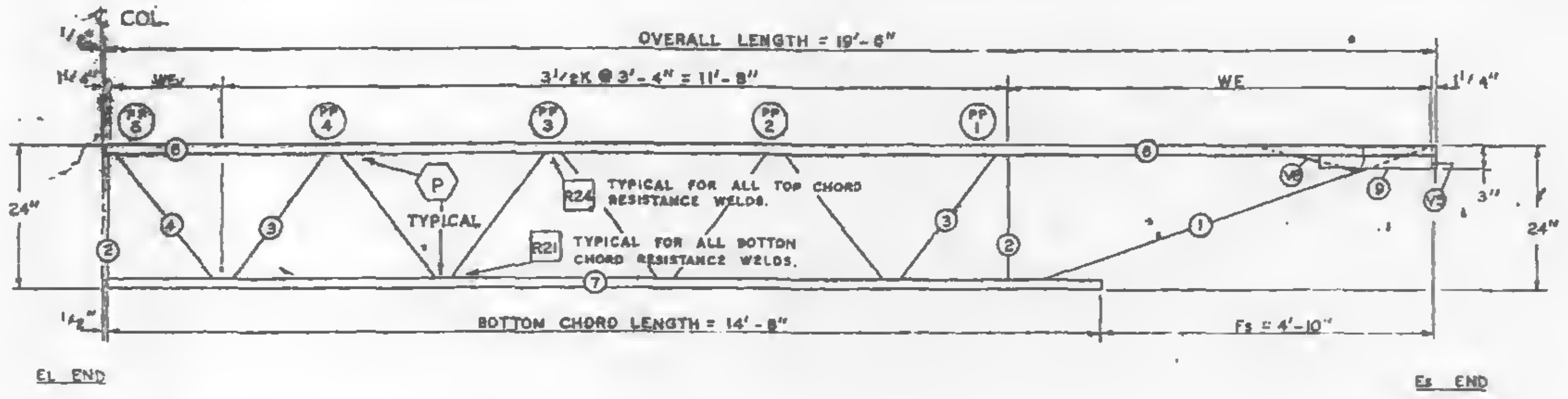
EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

NO.	DATE	REVISION	BY
4	7-17-68	HOLE SIZE - SECTION B-B	T.M.C.
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB, WT	T.M.C.
1	6-26-68	GENERAL	T.M.C.

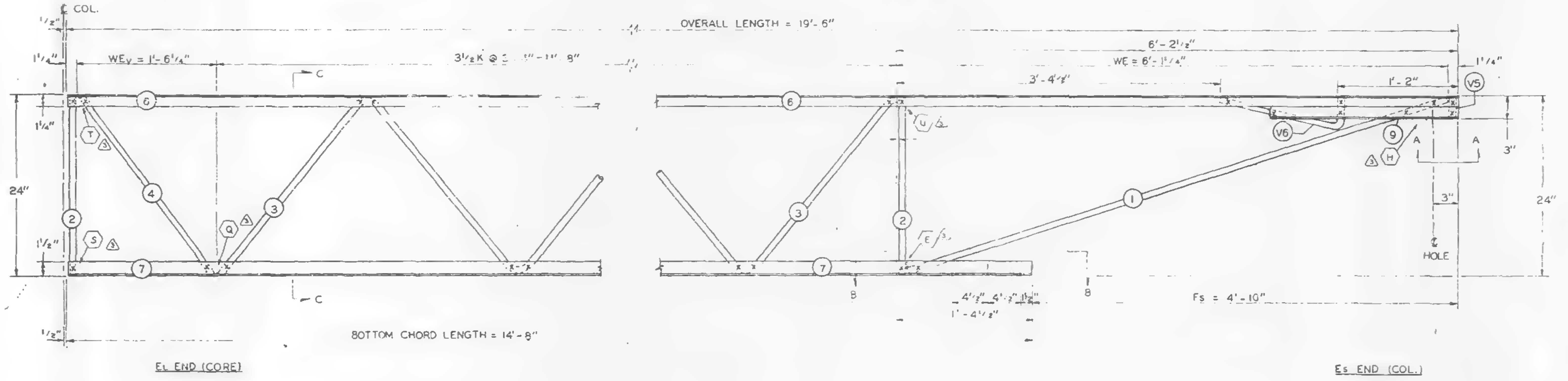
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-9
PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A DATE 7/24/68
DRAWN BY: gl
DATE APR. 20, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M. CHURA
DATE APR. 20, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER
FABRICATIO CONT. NO. W.T.C. 221
SHEET NO. BT 214



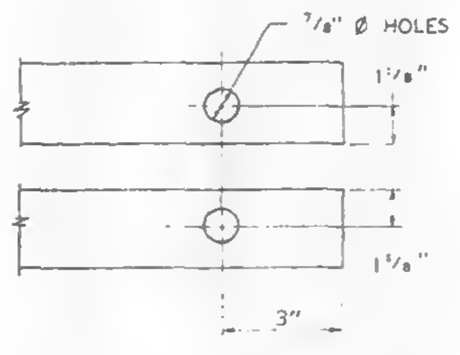
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	——	——
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"



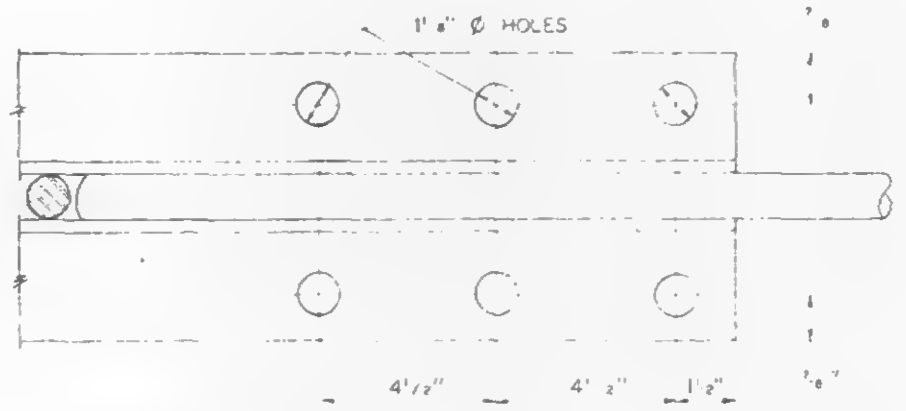
EL END (CORE)

Es END (COL.)

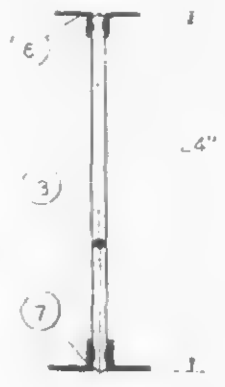
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (''''''').
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-9	4-1-68
7-AB4-15,1	1-3-68
7-AB4-16 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

2

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS1"				END STIFFENER						BEARING ANGLES			
															MK. V5			MK. V6						
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	——	—	——	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEV	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

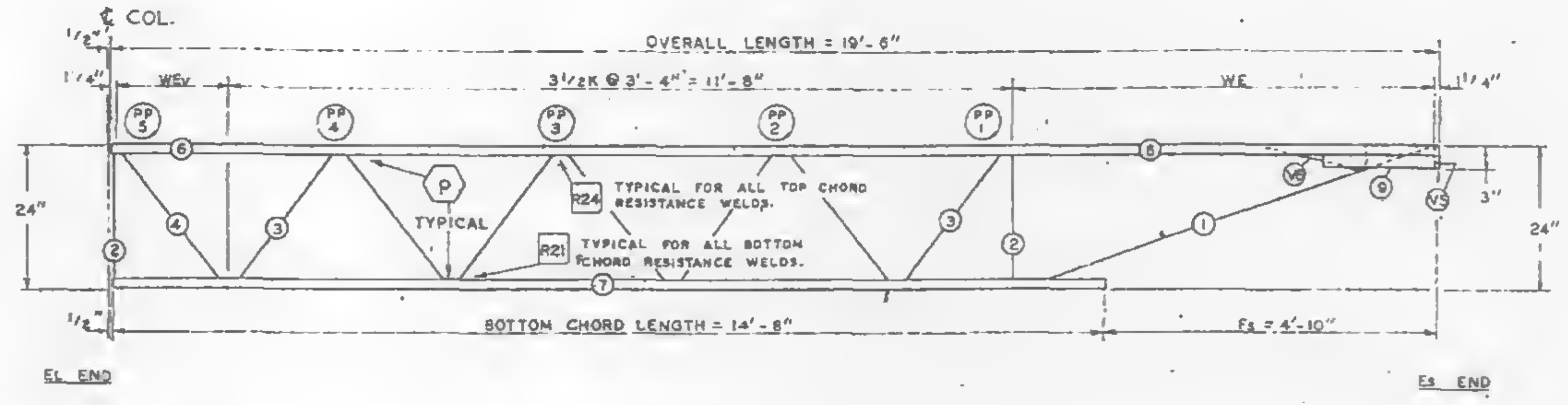
2

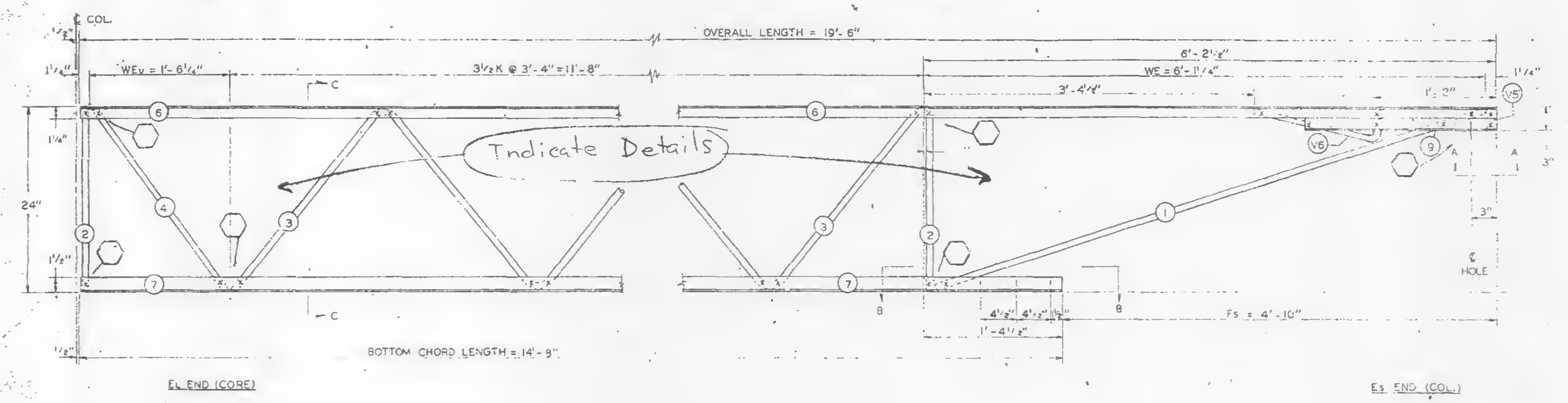
NO.	DATE	REVISION	BY
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB, WT	T.M.C.
1	6-26-68	GENERAL	T.M.C.

FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

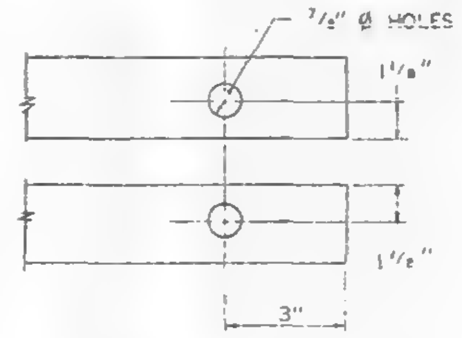
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN. DRAWING NO. 7-AD2-9 PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A DATE 7/9/68
DRAWN BY: gk DATE APR. 23, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE APR. 20, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 214



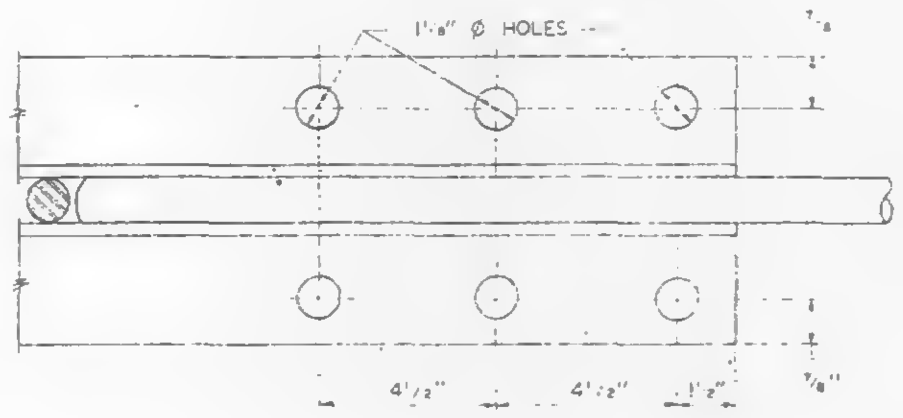


FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	-0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	———	———
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

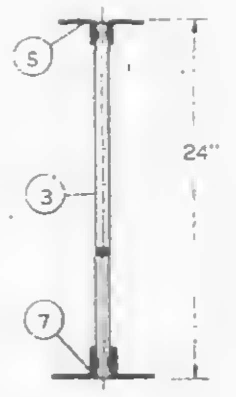
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-A82-1	4-1-68
7-A82-9	4-1-68
7-A84-15,1	1-3-68
7-A84-16 & 19	1-3-68
7-A84-28 & 41	1-3-69
7-A84-18 & 38	A-1-88

PAINT
LACLEDE ELECTROCOAT
RED NO. 10D01

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196.	6	A242	1½" x 1¼" x .275	19'-6"	7	A242	2" x 1½" x .25	14'-8"	3	A242	.98	17'-10¹³⁄₁₆"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS1"				END STIFFENER						BEARING ANGLES			
															MK. V5			MK. V6						
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6'-2⅞"	—	———	—	———	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5"

SKILLING [illegible]
CHRISTIANSEN [illegible]
Structural & Civil Engineers
[illegible]
7/5/68 SK

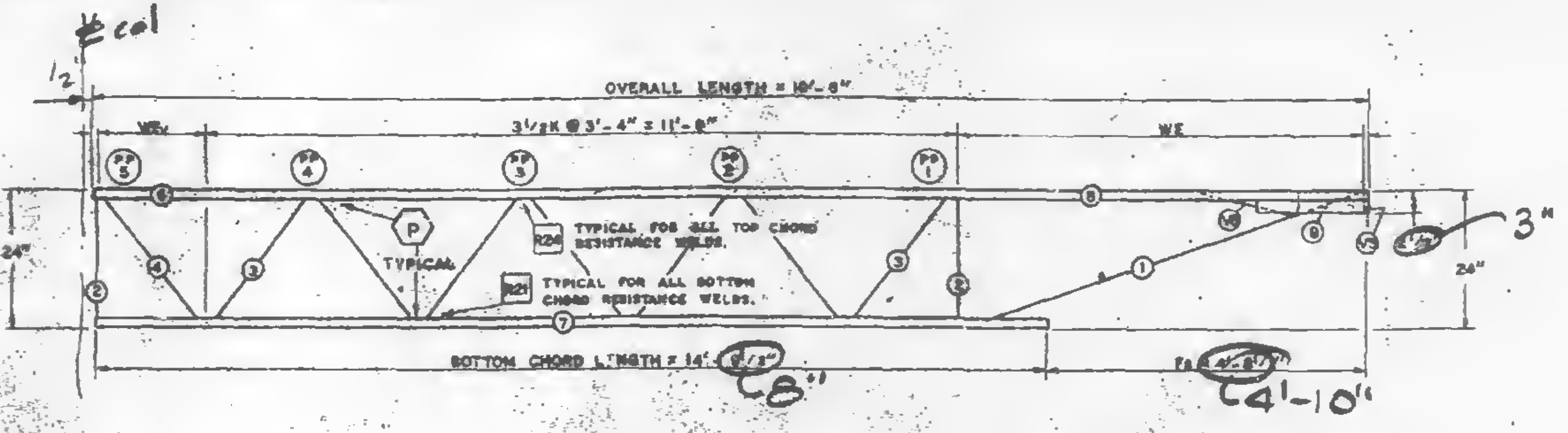
NO.	DATE	REVISION	BY
1	6-26-68	GENERAL	T.M.C.

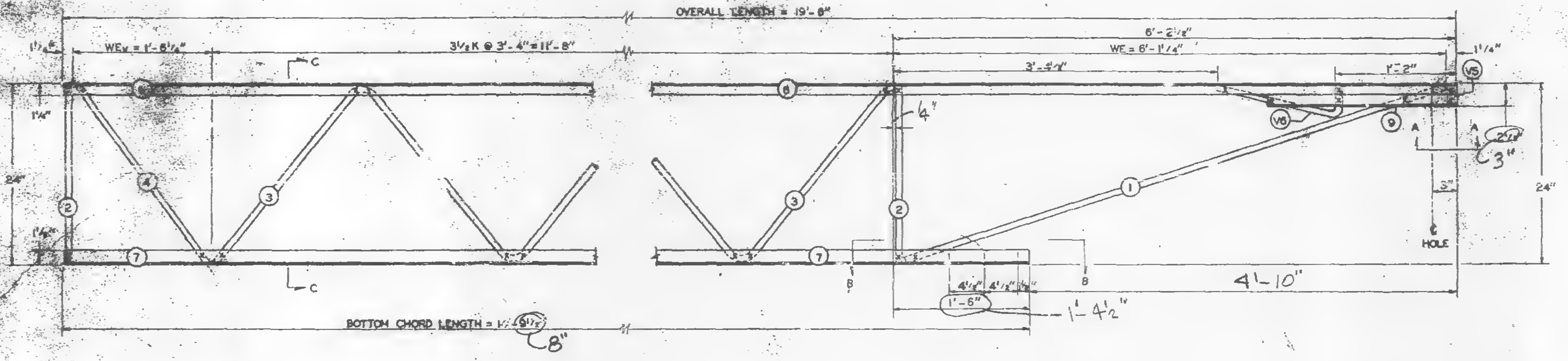
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

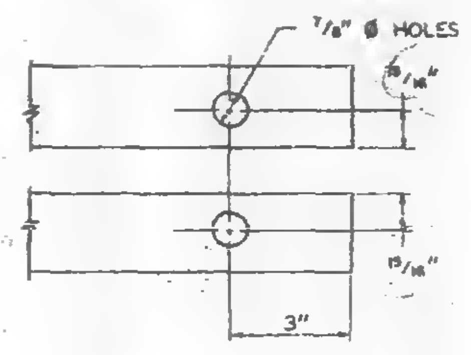
BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY LACLEDE STEEL COMPANY

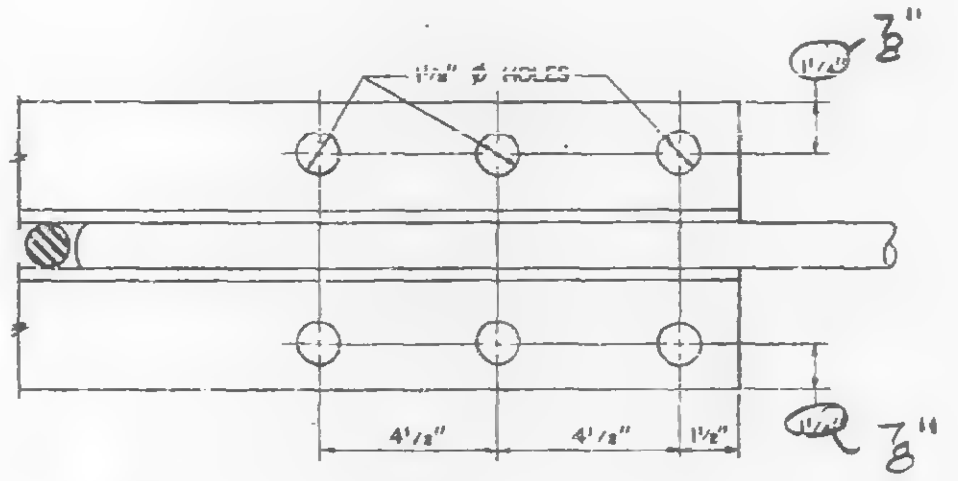
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-A82-9	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE	DRAWN BY: gk DATE APR. 20, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY: T.M. CHURA DATE APR. 20, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER	FABRICATION CONT. NO. WTC 221	SHEET NO. BT 214


℄ col
½"
OVERALL LENGTH = 19'-6"
WEv
3½K @ 3'-4" = 11'-8"
WE
PP 5
PP 4
PP 3
PP 2
PP 1
24"
P
TYPICAL
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R21 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
V6
V5
9
1
2
3
4
6
7
3"
24"
BOTTOM CHORD LENGTH = 14'-9½"
8"
4'-8½"
4'-10"

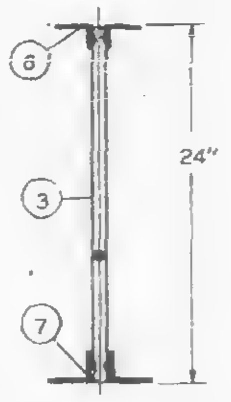




SECTION A-A



SECTION B-B



SECTION C-C

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K₁"	——	——
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural Engrs.
☐ REVISED
☒ REVIEWED AS NOTED
☐ RESUBMIT
☐ REJECTED
5/31/68 WWG

TISHMAN
MAY 23 1968
CONSTRUCTION DEPT.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-2	4-1-68
7-AB4-15.1	10-27-68
7-AB4-16 & 19	1-3-68
7-AB4-29 & 41	1-3-68
7-AB4-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x .275	19'-6"	7	A242	2" x 1½" x .25	14'-9½" 8"	3	A242	.98	17'-10⅝"	3½K @ 3'-4" = 11'-8"			—	—

E.L.	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS₁"				END STIFFENER						BEARING ANGLES			
															MK. V5			MK. V6						
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	——	—	——	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	1½" x 1¼" x .275	2'-3"

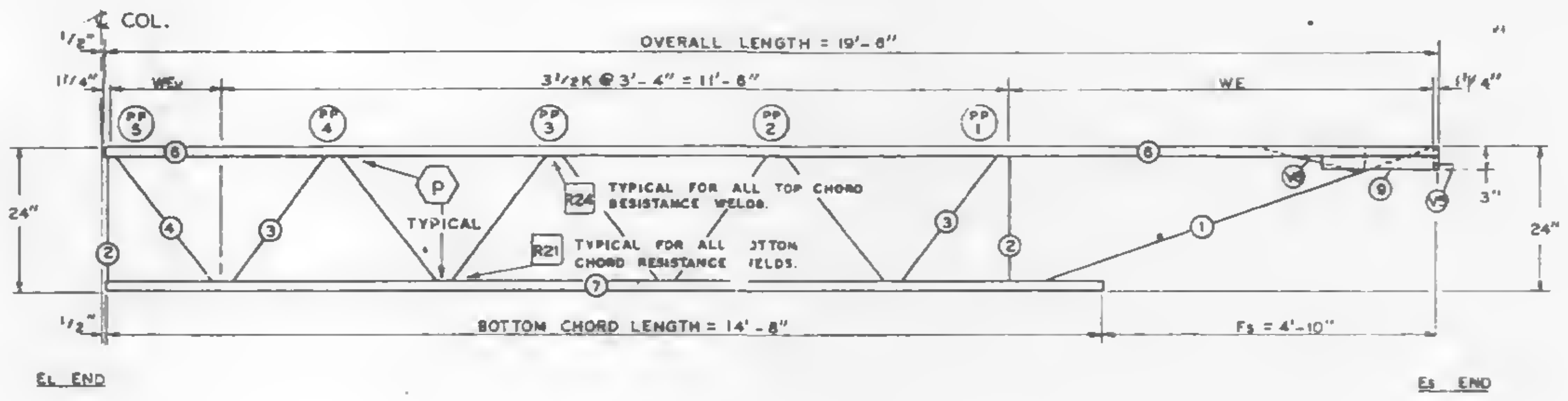
E.L. END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5"

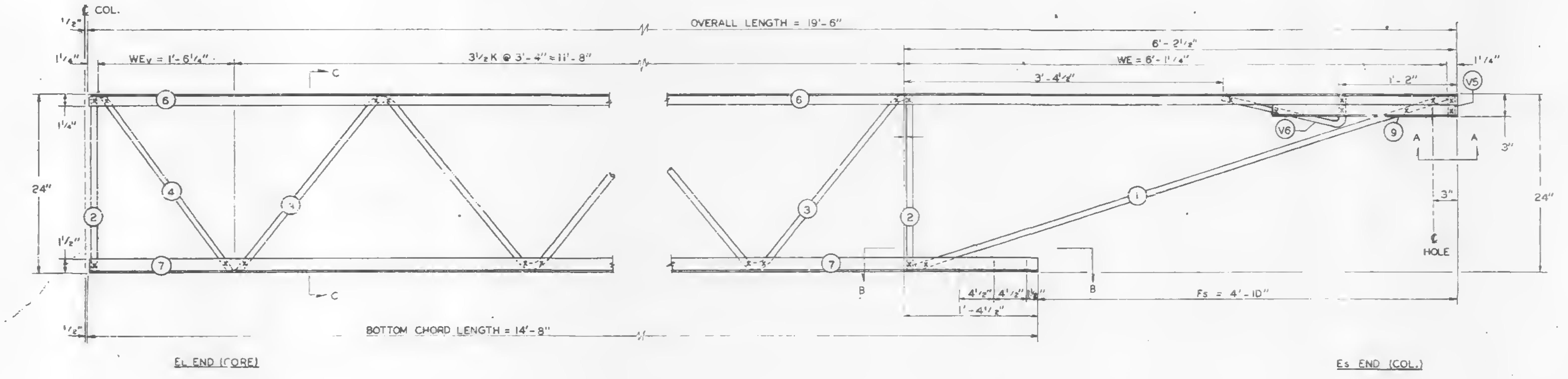
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY: LACLEDE STEEL COMPANY

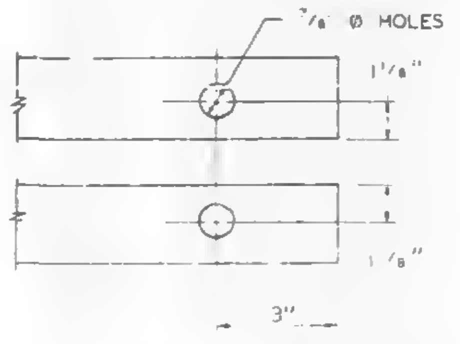
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-2 PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A. DATE
DRAWN BY: [illegible]
DATE: [illegible]
APPROVED FOR FABRICATION BY LACLEDE STEEL CO. DATE
CHECKED BY: T.M. CHURA
DATE: APR 30, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: R.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 214


℄ COL.
OVERALL LENGTH = 19'-6"
1/2"
1¼"
WEV
3½K @ 3'-4" = 11'-8"
WE
1¼"
PP 5
PP 4
PP 3
PP 2
PP 1
P
TYPICAL
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R21 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
24"
3"
24"
BOTTOM CHORD LENGTH = 14'-8"
Fs = 4'-10"
EL END
Es END

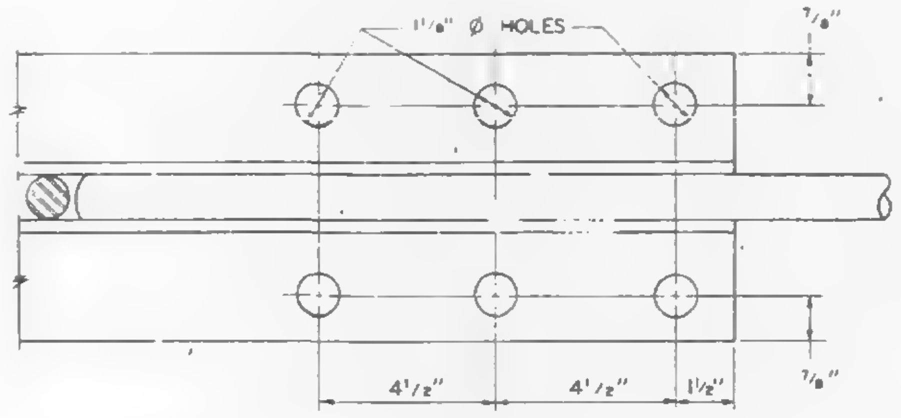


ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (IIIIIII).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.

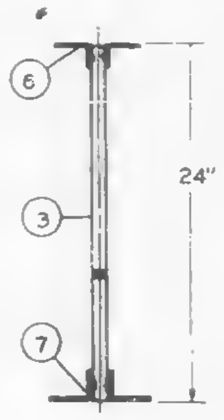
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	———	———
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-9	4-1-68
7-AB4-15,1	1-3-68
7-AB4-16 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB5-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	5	A242	1½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

⚠2

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS1"				END STIFFENER MK. V5			END STIFFENER MK. V6			BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	———	—	———	A242	.98	2⅞	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEV	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

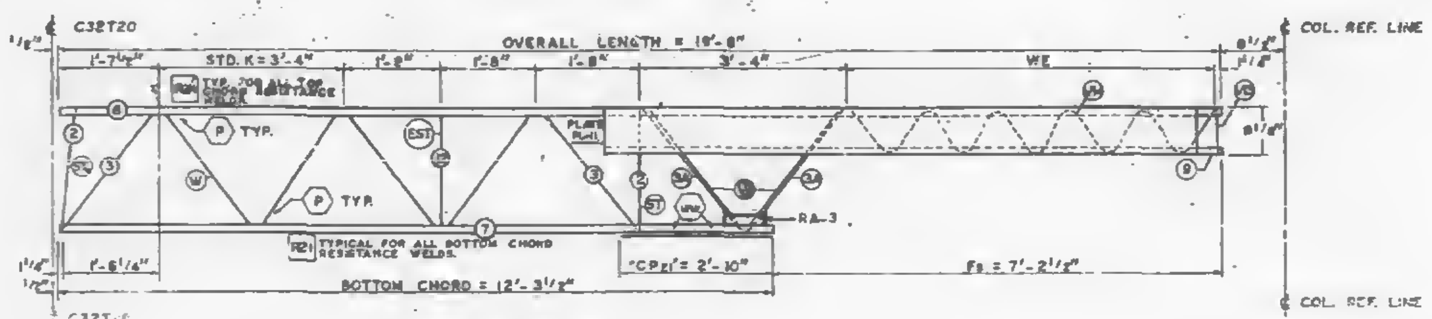
2

NO.	DATE	REVISION	BY
⚠2	7-3-68	MAIN WEB, WT	T.M.C.
⚠1	6-26-68	GENERAL	T.M.C.

FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

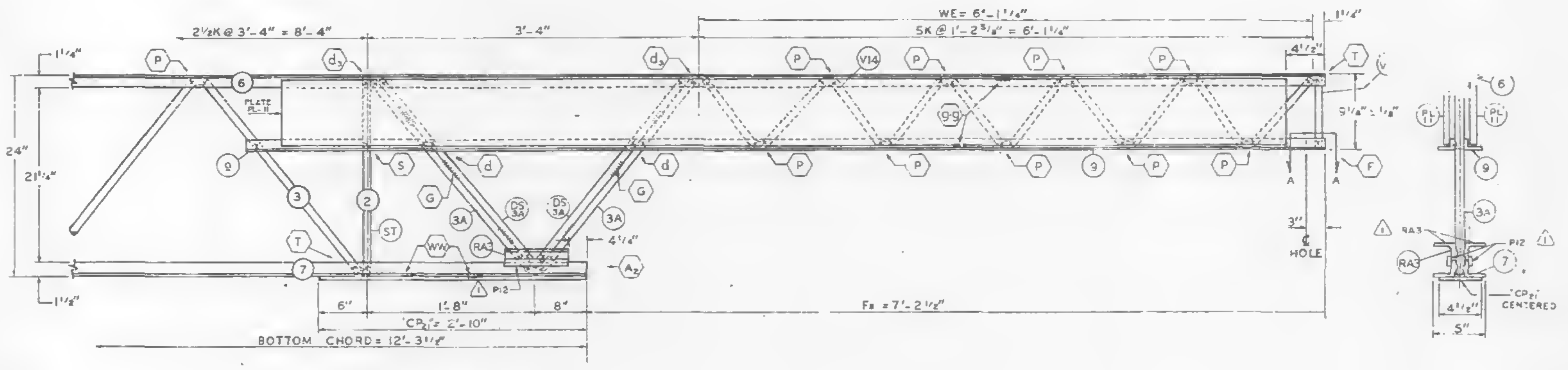
BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-9
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE
DRAWN BY: gk
DATE APR. 20, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA
DATE APR. 20, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. BT 214



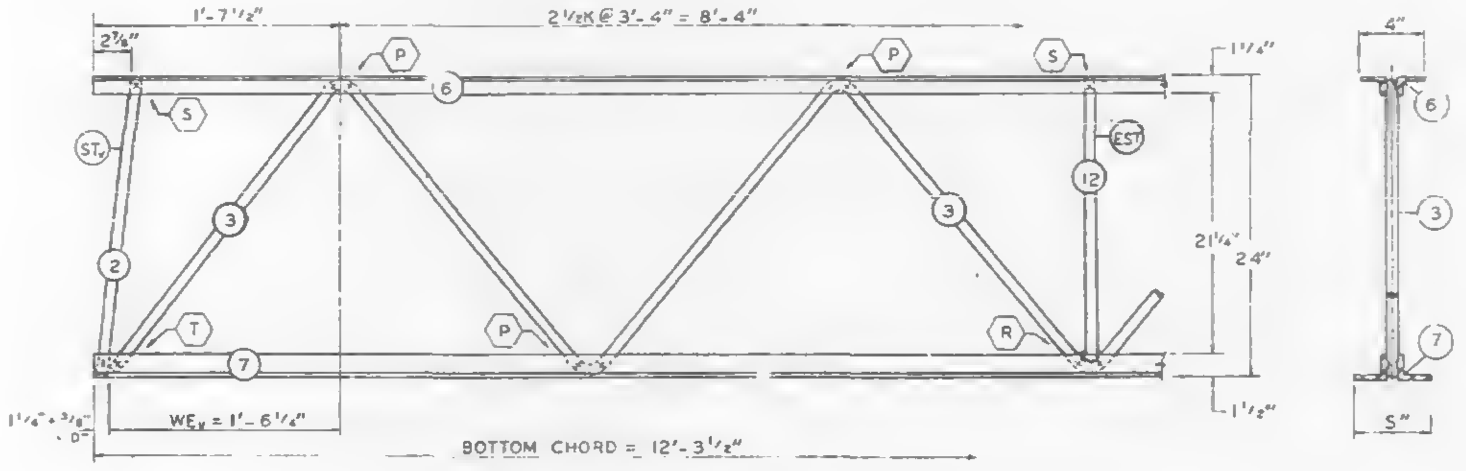
TRUSS ELEVATION

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"

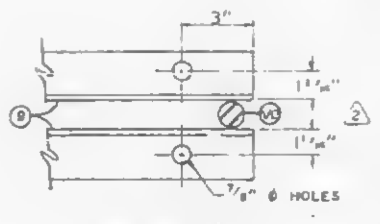


Es END (COLUMN)

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie.,
LETTERS IN HEXAGONS INDICATE WELD DETAILS. ie., P.
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, ST 293 & ST 294.
STIFFENER PL SHOWN ON SHEET ST 408.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283 & ST 284.



Eʟ END (CORE)



SECTION A-A

REF. DRWG.
7-A82-14 10-4-68
7-A81-55 10-15-68
7-A84-54 10-4-68
7-A84-58 10-4-68
SA-124 10-11-68

PAINT
LACLEDE ELECTROCOAT
REQ NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		REINFORCING ANGLES ⚠1					SPECIAL PLATES ⚠1				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH			MK.	PCS.	TYPE STEEL	ANGLE SIZE	LENGTH	MK.	PCS.	TYPE STEEL	SIZE	LENGTH
24T14A - 196	6	A242	1½"x1¼"x.275"	19'-6"	7	A242	2"x1½"x.25"	12'-3½"	3 3A	A242 A242	.98 .98	15'-11½" [illegible]	3K @ 3'-4" = 10'-0" K @ 3'-4" = [illegible]	12	A242	.98	[illegible]	1'-10⅞"			RA3	2	A242	2"x1½"x.25"	7½"	P12	2	A36	1"x⅜"	7½"

Es END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER MK. V13			END STIFFENER MK. V14			STIFFENER PLATE ⚠1				
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE ⚠2	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PLATE SIZE	LENGTH	PCS.
	24T14A - 196	2	A242	.98	1'-11¾"	9	A242	2"x1½"x.25"	10'-9½"	6'-1¼"	DS 3A	A242	.98	2'-3¾"	CP 21	A36	4⅛x.37	2'-10"	A242	.98	9"	A242	.98	9'-3"	PL 11	A36	8"x.75"	10'-0"	2

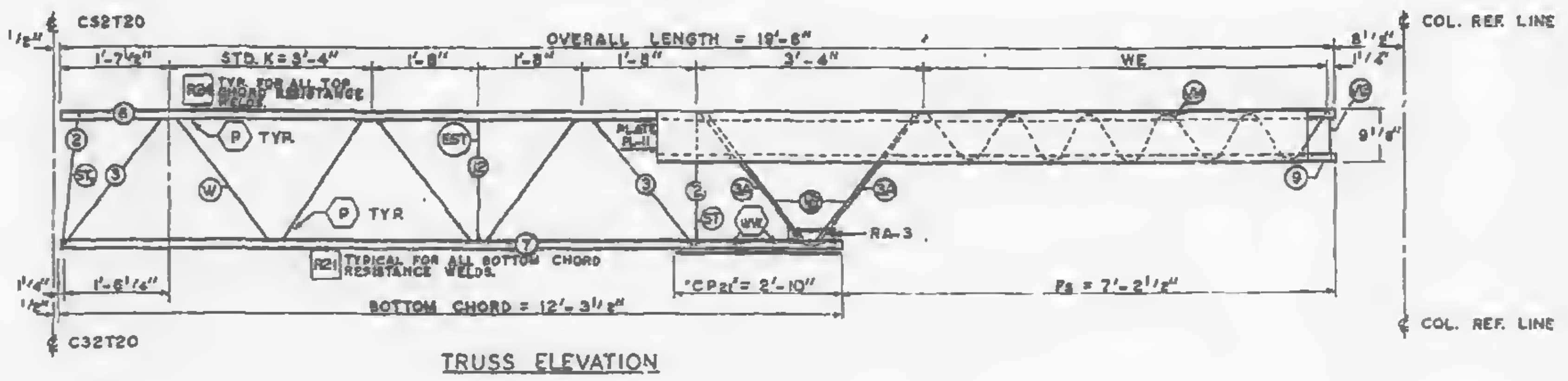
Eʟ END	TRUSS DESIGNATION	INCLINED "STᵥ" STRUT				WEᵥ
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T14A - 196	2	A242	.98	1'-11¾"	1'-6¼"

NO.	DATE	REVISION	BY
⚠2	3-18-69	AS NOTED	G.D.C.
⚠1	12-26-68	AS NOTED	G.D.C.

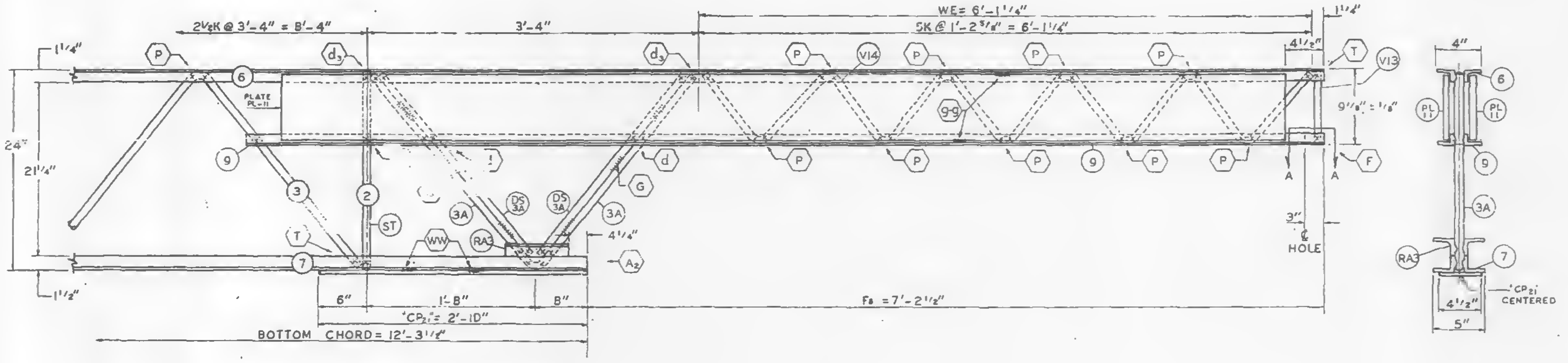
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14A x 19'-6" LONG
WORLD TRADE CENTER TOWERS A & B

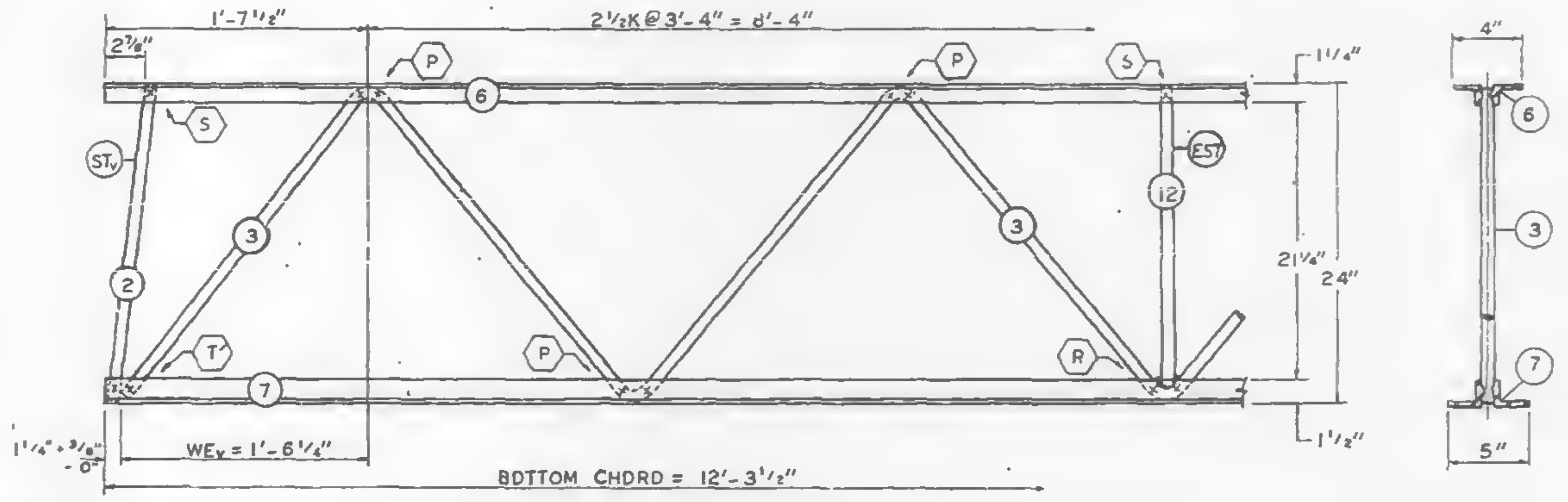
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A. DATE 3/24/69
DRAWN BY GDC DATE OCT. 31, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
LACLEDE STEEL CO.
CHECKED BY: T.M. CHURA DATE OCT. 31, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 214 A



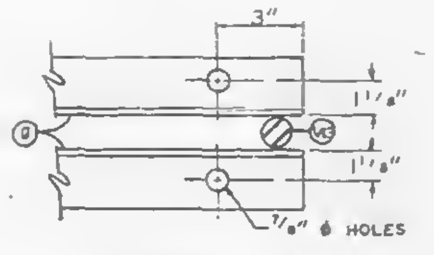
TRUSS ELEVATION



Es END (COLUMN)



EL END (CORE)



SECTION A-A

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	19'-6"	± 5/8"
WEB DEPTH	23 7/8"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (IIIIIII).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R21.
LETTERS IN HEXAGONS INDICATE WELD DETAILS. ie., P.
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, ST 293 & ST 294.
STIFFENER PL SHOWN ON SHEET, ST 408.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283 & ST 284.

REF. DRWG.		
	7-AB2-14	10-4-68
	7-AB1-55	10-15-68
	7-AD4-54	10-4-68
	7-AB4-56	10-4-68
	5A-124	10-11-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH		
24T14A - 196	6	A242	1½"x1¼"x.275"	19'-6"	7	A242	2"x1½"x.25"	12'-3½"	3 3A	A242 A242	.98 .98	15'-1½" 5'-1½"	3K @ 3'-4" = 10'-0" 1K @ 3'-4" = 3'-4"	12	A242	.98	1	1'-10⅞"		

Es END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER						STIFFENER PLATE					REINFORCING ANGLES				
																			MK. V13			MK. V14												
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PLATE SIZE	LENGTH	PCS.	MK.	PCS.	TYPE STEEL	SIZE	LENGTH
	24T14A - 196	2	A242	.98	1'-11¾"	9	A242	1½"x1¼"x.275"	10'-9½"	6'-1¼"	DS 3A	A242	.98	2'-3¾"	CP 21	A36	4½x.39	2'-10"	A242	.98	9"	A242	.98	9'-3"	PL 11	A36	8"x.75"	10'-0"	2	RA3	2	A242	2"x1½"x.25"	7½"

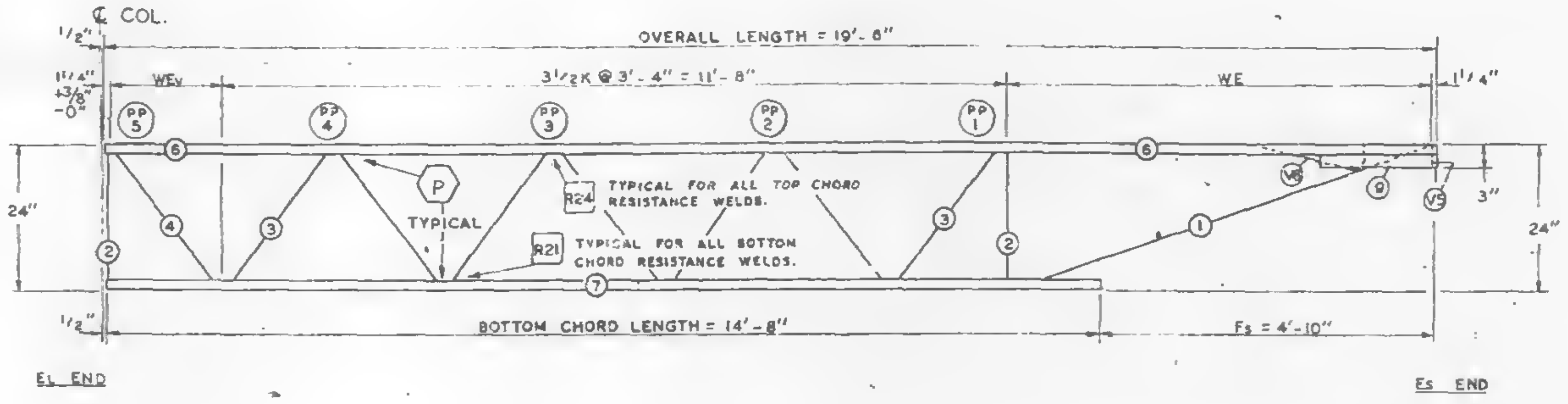
EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T14A - 196	2	A242	.98	1'-11¾"	1'-6¼"

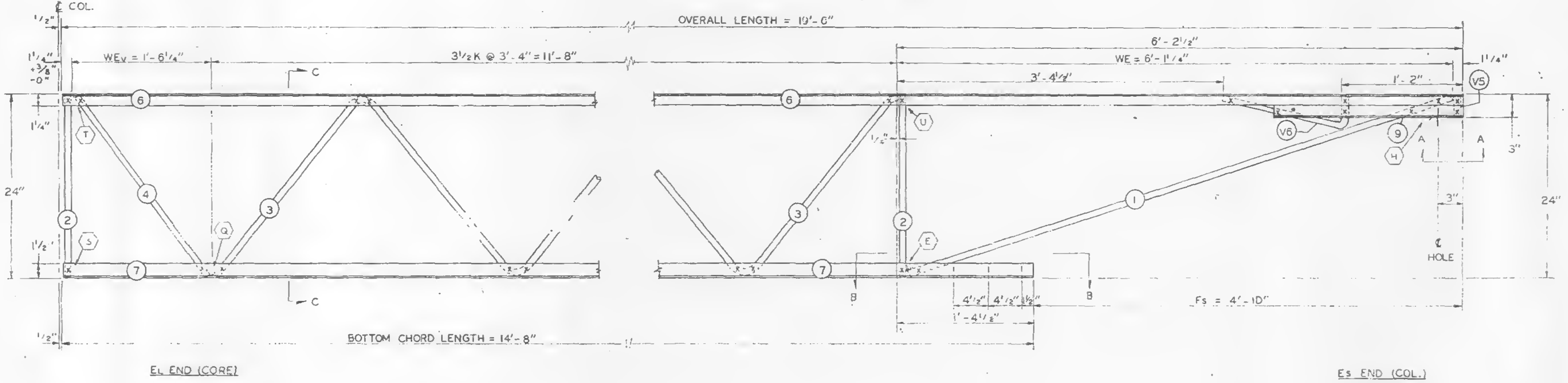
PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14A x 19'-6" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A. DATE 11/15/68
DRAWN BY: ajc DATE OCT. 31, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M. CHURA DATE OCT. 31, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 214 A


℄ COL.
OVERALL LENGTH = 19'-6"
WE$_V$
3½K @ 3'-4" = 11'-8"
WE
1¼"
24"
3"
PP 5
PP 4
PP 3
PP 2
PP 1
P
TYPICAL
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R21 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
V6
V5
BOTTOM CHORD LENGTH = 14'-8"
Fs = 4'-10"
EL END
ES END



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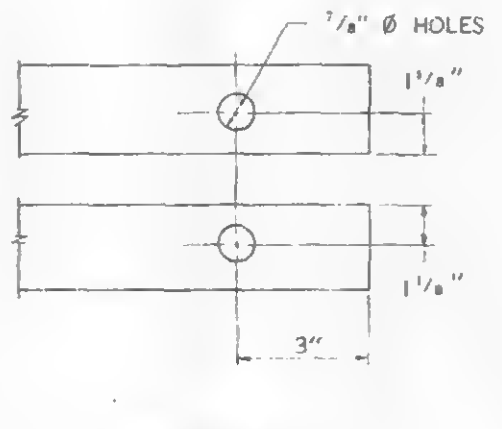
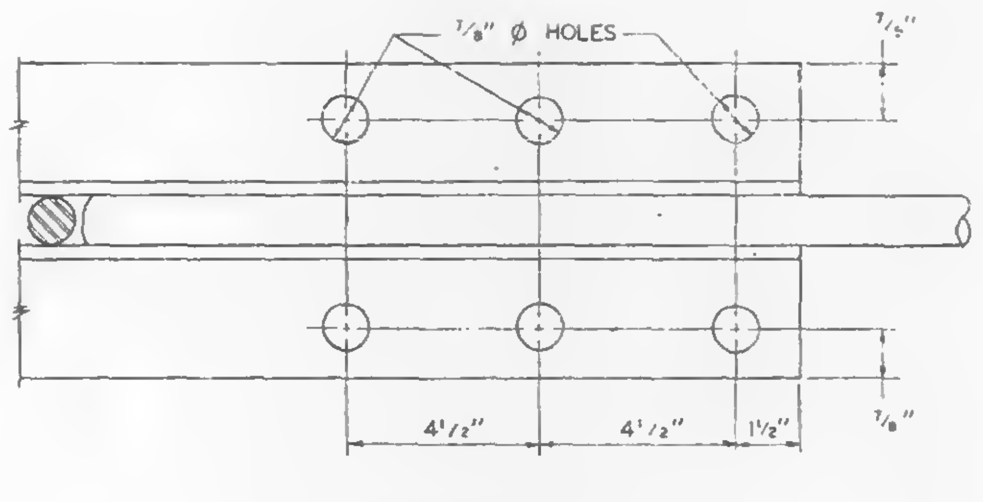
<tr><th colspan="3">FABRICATION REQUIREMENTS</th></tr>
<tr><th></th><th>DESIGN</th><th>TOLERANCE</th></tr>
<tr><td>CAMBER AT MIDSPAN</td><td>0"</td><td>+ 3/8"</td></tr>
<tr><td>DESIGN DEPTH</td><td>24"</td><td>+ 1/4"</td></tr>
<tr><td>PANEL "K"</td><td>3'-4"</td><td>+ 1/4"</td></tr>
<tr><td>PANEL "K$_1$"</td><td>—</td><td>—</td></tr>
<tr><td>WEB DEPTH</td><td>23 7/8"</td><td>+ 1/4"</td></tr>
<tr><td>OVERALL LENGTH</td><td>19'-6"</td><td>+ 3/8"</td></tr>
</table>

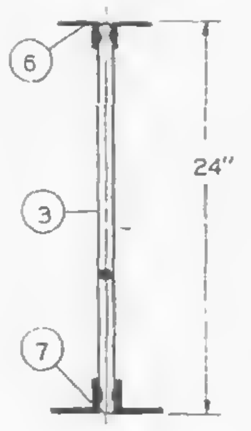
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES.
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, i.e., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.		
	7-AB2-1	1-6-69
	7-AB2-9	1-6-69
	7-AB4-15.1	10-4-68
	7-AB4-18	7-22-66
	7-AB4-28	7-22-68
	7-AB4-18	1-6-69

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

<table>
<tr><th>TRUSS DESIGNATION</th><th colspan="4">TOP CHORD TWO ANGLES</th><th colspan="4">BOTTOM CHORD TWO ANGLES</th><th colspan="5">MAIN WEB "W"</th><th colspan="2">TRUSS DATA</th><th colspan="2">FILLER</th></tr>
<tr><th></th><th>MK.</th><th>TYPE STEEL</th><th>CHORD SIZE</th><th>LENGTH</th><th>MK.</th><th>TYPE STEEL</th><th>CHORD SIZE</th><th>LENGTH</th><th>MK.</th><th>TYPE STEEL</th><th>DIA.</th><th>LENGTH</th><th>NO. OF K</th><th></th><th></th><th>NO.</th><th>DIA.</th></tr>
<tr><td>24T14B-196</td><td>6</td><td>A242</td><td>1½" x 1¼" x .275"</td><td>19'-6"</td><td></td><td>A242</td><td>2" x 1½" x .25"</td><td>14'-8"</td><td>3</td><td>A242</td><td>.98</td><td>17'-11¼"</td><td>3½K @ 3'-4" = 11'-8"</td><td></td><td></td><td>—</td><td>—</td></tr>
</table>

<table>
<tr><th rowspan="3">ES END</th><th>TRUSS DESIGNATION</th><th>WE</th><th colspan="4">VERTICAL "ST" STRUT</th><th colspan="4">DIAGONAL "T" STRUT</th><th colspan="4">WEB "DS$_1$"</th><th colspan="6">END STIFFENER</th><th colspan="4">BEARING ANGLES</th></tr>
<tr><th></th><th></th><th rowspan="2">MK.</th><th rowspan="2">TYPE STEEL</th><th rowspan="2">DIA.</th><th rowspan="2">LENGTH</th><th rowspan="2">MK.</th><th rowspan="2">TYPE STEEL</th><th rowspan="2">DIA.</th><th rowspan="2">LENGTH</th><th rowspan="2">MK.</th><th rowspan="2">TYPE STEEL</th><th rowspan="2">DIA.</th><th rowspan="2">LENGTH</th><th colspan="3">MK. V5</th><th colspan="3">MK. V6</th><th rowspan="2">MK.</th><th rowspan="2">TYPE STEEL</th><th rowspan="2">CHORD SIZE</th><th rowspan="2">LENGTH</th></tr>
<tr><th></th><th></th><th>TYPE STEEL</th><th>DIA.</th><th>LENGTH</th><th>TYPE STEEL</th><th>DIA.</th><th>LENGTH</th></tr>
<tr><td></td><td>24T14B-196</td><td>6'-1¼"</td><td>2</td><td>A242</td><td>.98</td><td>1'-11¾"</td><td>1</td><td>A242</td><td>.98</td><td>6"-2⅞"</td><td>—</td><td>—</td><td>—</td><td>—</td><td>A242</td><td>.98</td><td>2⅞"</td><td>A242</td><td>.98</td><td>1'-11¼"</td><td>9</td><td>A242</td><td>2" x 1½" x .25</td><td>2'-3"</td></tr>
</table>

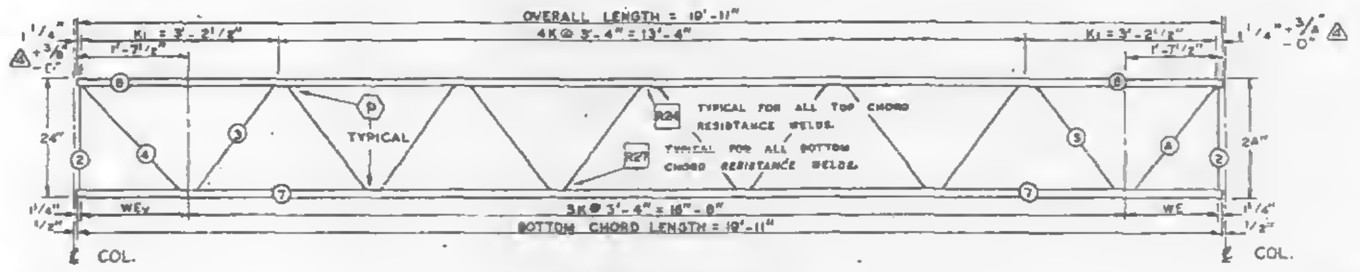
<table>
<tr><th rowspan="3">EL END</th><th>TRUSS DESIGNATION</th><th colspan="4">VERTICAL "ST" STRUT</th><th>WE$_V$</th><th colspan="5">WEB "WT"</th></tr>
<tr><th></th><th>MK.</th><th>TYPE STEEL</th><th>DIA.</th><th>LENGTH</th><th></th><th>MK.</th><th>TYPE STEEL</th><th>PCS.</th><th>DIA.</th><th>LENGTH</th></tr>
<tr><td>24T14B-196</td><td>2</td><td>A242</td><td>.98</td><td>1'-11¾"</td><td>1'-6¼"</td><td>4</td><td>A242</td><td>1</td><td>.98</td><td>2'-5½"</td></tr>
</table>

NO.	DATE	REVISION	BY

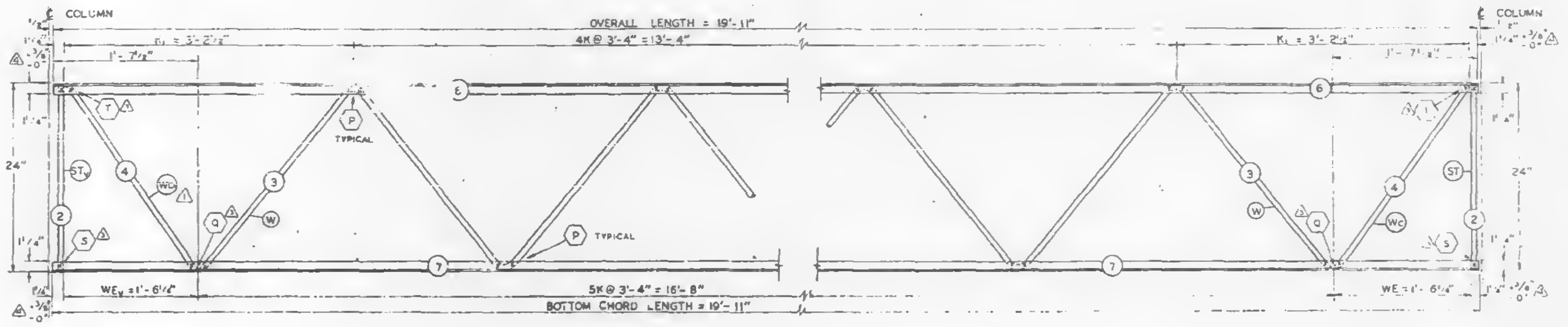
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14B x 19'-6" LONG

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-9
PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A.
DATE 2/10/69
DRAWN BY: [illegible]
DATE: JAN 20, 1969
APPROVED FOR FABRICATION BY ________ FOR FABRICATOR
DATE:
CHECKED BY: T.M. CHURA
DATE: JAN 28 1969
IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER
FABRICATION CONT. NO. W.T.C. 2[illegible]
SHEET NO. BT 214B


OVERALL LENGTH = 19'-11"
4K @ 3'-4" = 13'-4"
K1 = 3'-2½"
1'-7½"
1¼"
+⅜" -0"
24"
TYPICAL
P
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R27 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
WEv
WE
5K @ 3'-4" = 16'-8"
BOTTOM CHORD LENGTH = 19'-11"
½"
℄ COL.
EL END
ES END

TRUSS ELEVATION



EL END ELEVATION

ES END ELEVATION

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (*).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290 AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	5-10-68
7-AB4-15 & 18	5-6-68
7-ASA-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15 - 1911	6	A242	1½"x1¼"x.275	19'-11"	7	A242	1½"x1¼"x.23	19'-11"	3	A242	.98	25'-7⅞"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

ES END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	1'-6¼"	2	A242	.98	1'-11⅝"	4	A242	1	.98	2'-5½"

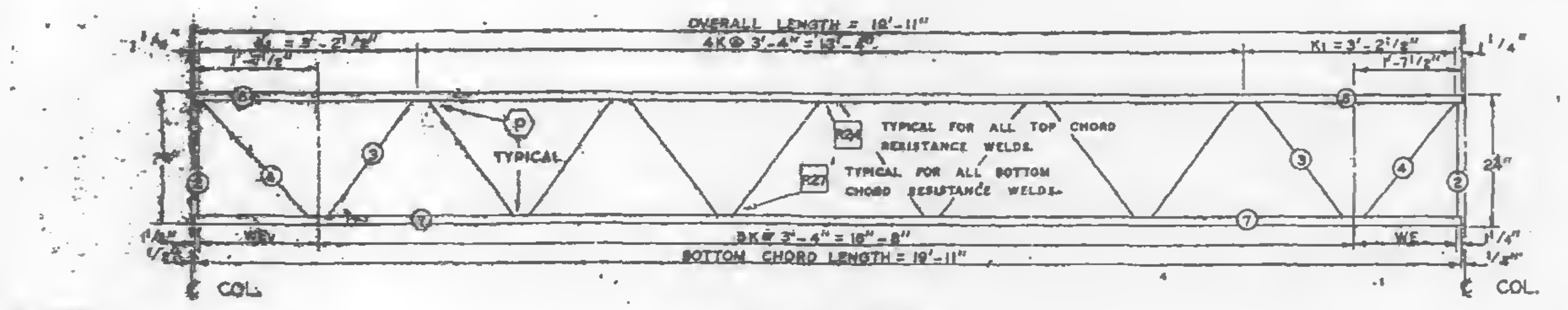
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "Wc"				
															MK. VS			MK. VB							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5½"

NO	DATE	REVISION	BY
4	9-6-68	END DIST (2)	T.M.C.
3	7-5-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB	T.M.C.
1	6-28-68	REF. DRWG., WCV	T.M.C.

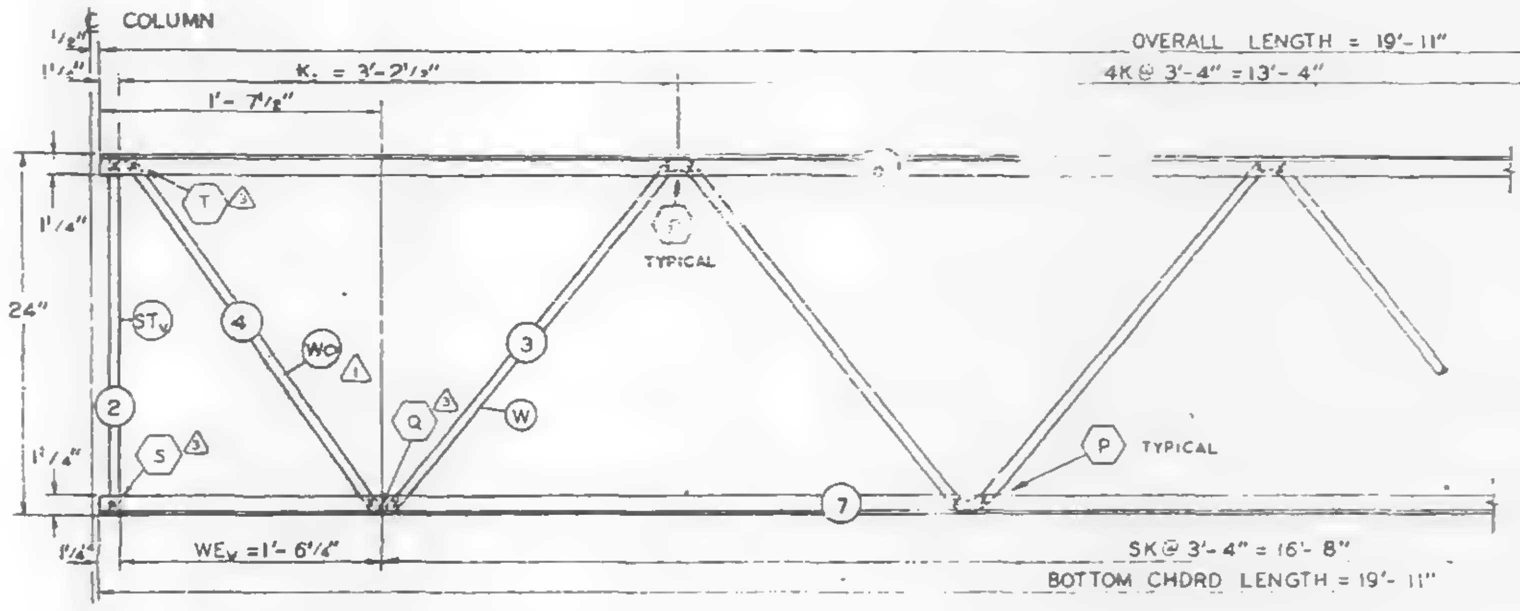
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER N.Y.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

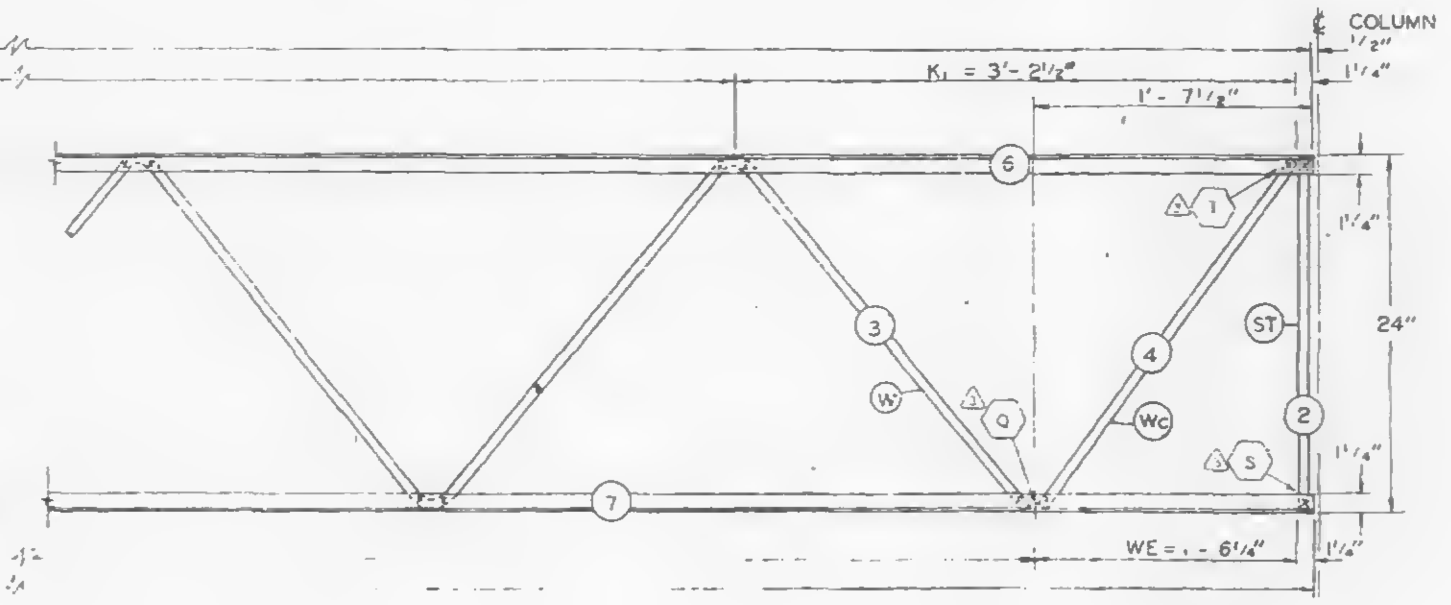
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-10
PLATE
APPROVED FOR FABRICATION BY FOR CONYA DATE 9/10/68
DRAWN BY gdc DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M.CHURA DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT215



TRUSS ELEVATION



EL END ELEVATION



Es END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290 AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., ⬡A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	6-10-68 △1
7-AB4-16 & 18	5-6-68 △1
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 1DDD1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15-1911	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.23"	19'-11"	3	A242	.98	25'-7½" △2	5K@ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5⅛"

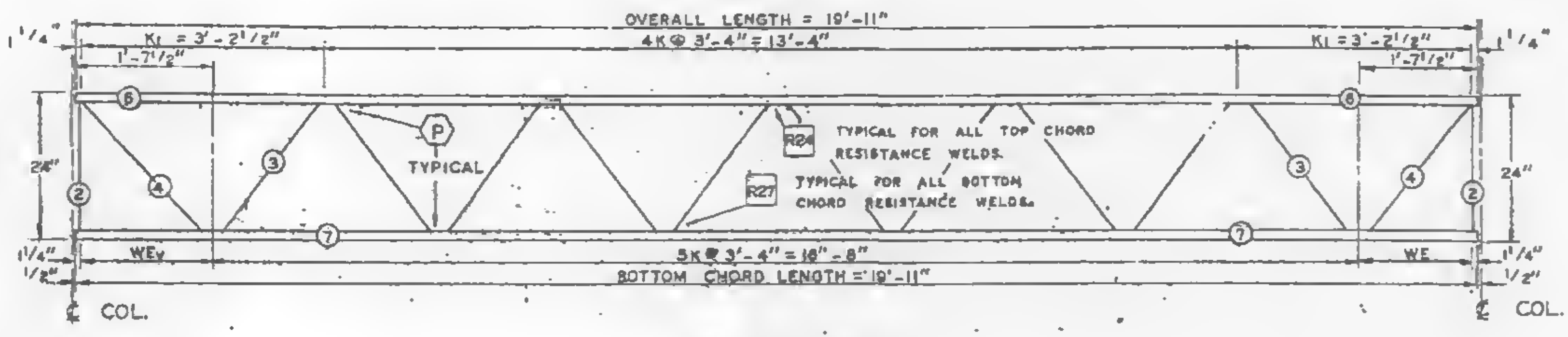
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "Wcv" △1				
															MK. Y5			MK. Y6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5⅛"

NO.	DATE	REVISION	BY
△3	7-5-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	REF. DRWG., WCV	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

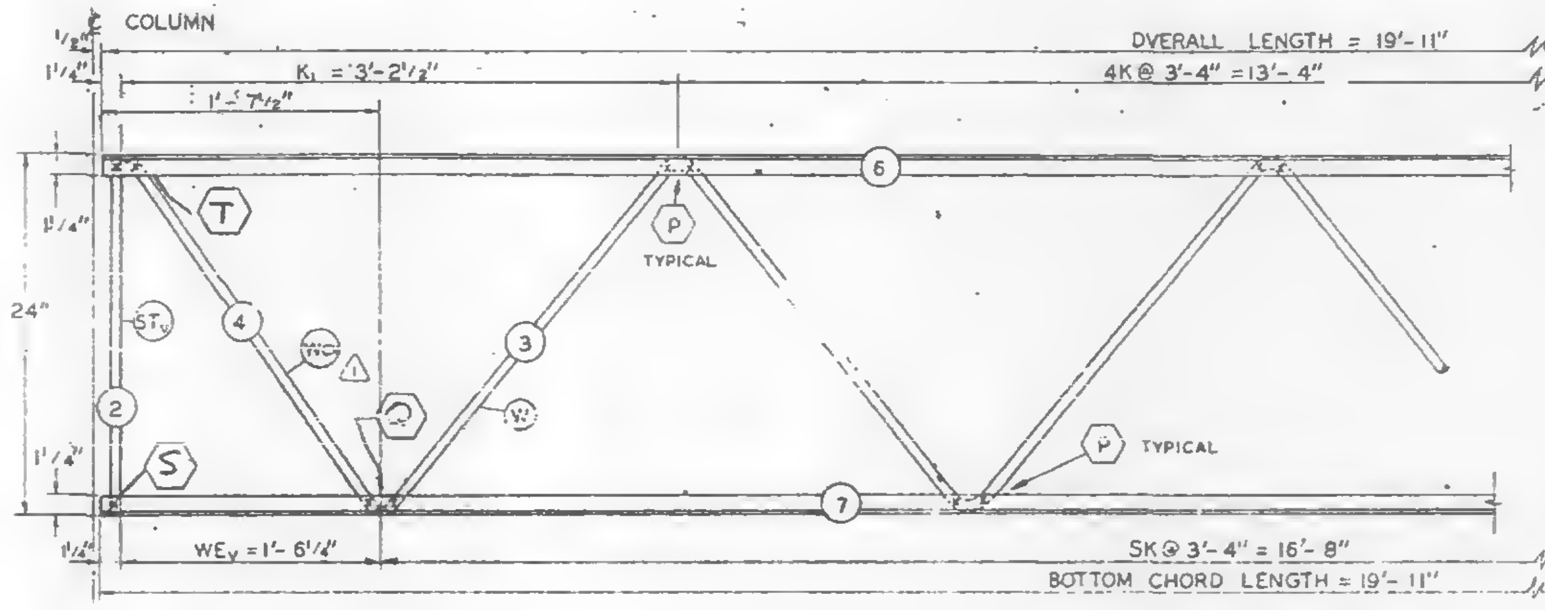
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10
PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A
DATE 7/9/68
DRAWN BY: gdc
DATE MAY 24, 68
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO W T C 221
SHEET NO BT215



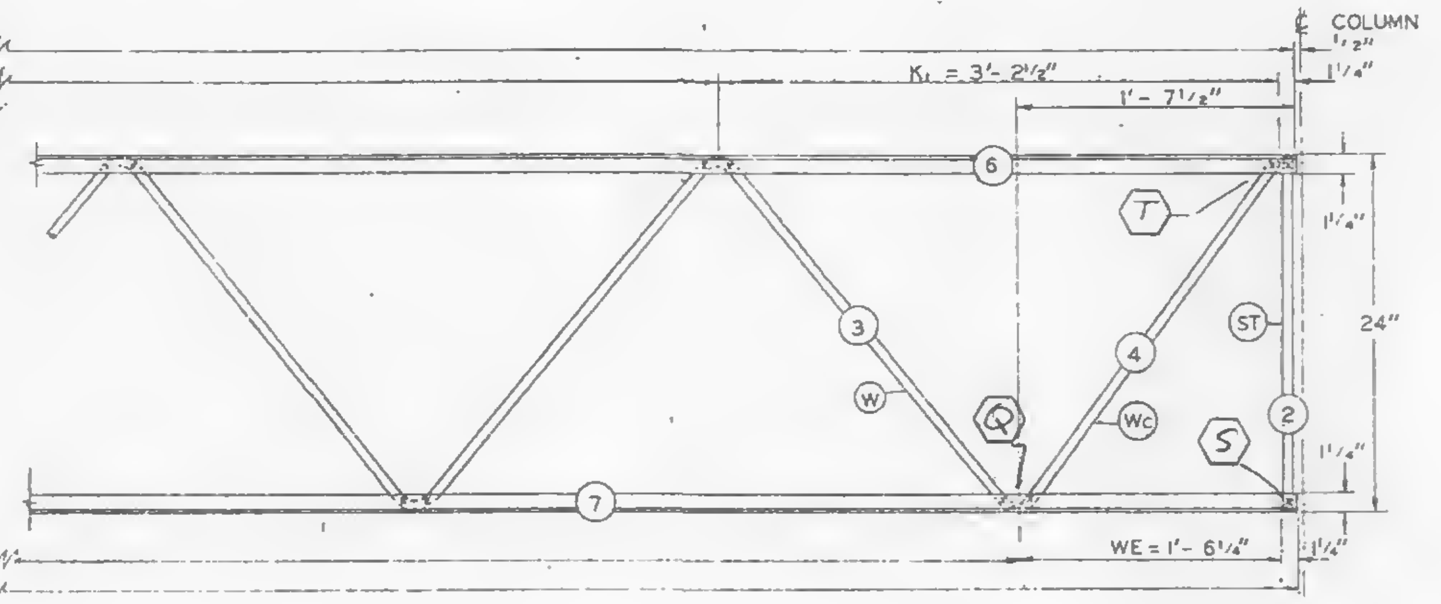
EL END

TRUSS ELEVATION

Es END



EL END ELEVATION



Es END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290 AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	6-10-68 ⚠1
7-AB4-16 & 18	5-6-68 ⚠1
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15-1911	6	A242	1½"x1¼"x.275	19'-11"	7	A242	1½"x1¼"x.23	19'-11"	3	A242	.98	30'-6½"	5K @ 3'-4" = 16'-8"	—	——	—	——	——			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "Wcv" ⚠1				
															MK. V5			MK. V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	—	——	——	——	1'-6¼"	—	——	—	——	2	A242	.98	1'-11¾"	——	—	——	——	—	——	4	A242	1	.98	2'-5½"

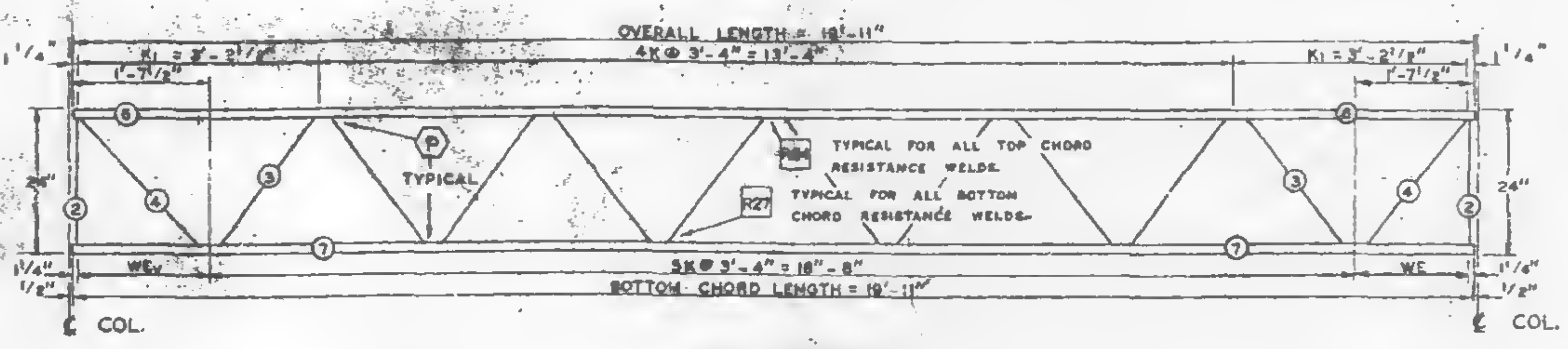
SKILLING, HELLE, CHRISTIANSEN, ROBERTSON
Structural & Civil Engineers
7/5/68 SK

NO.	DATE	REVISION	BY
⚠1	6-26-68	REF. DRWG. .. WCV	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

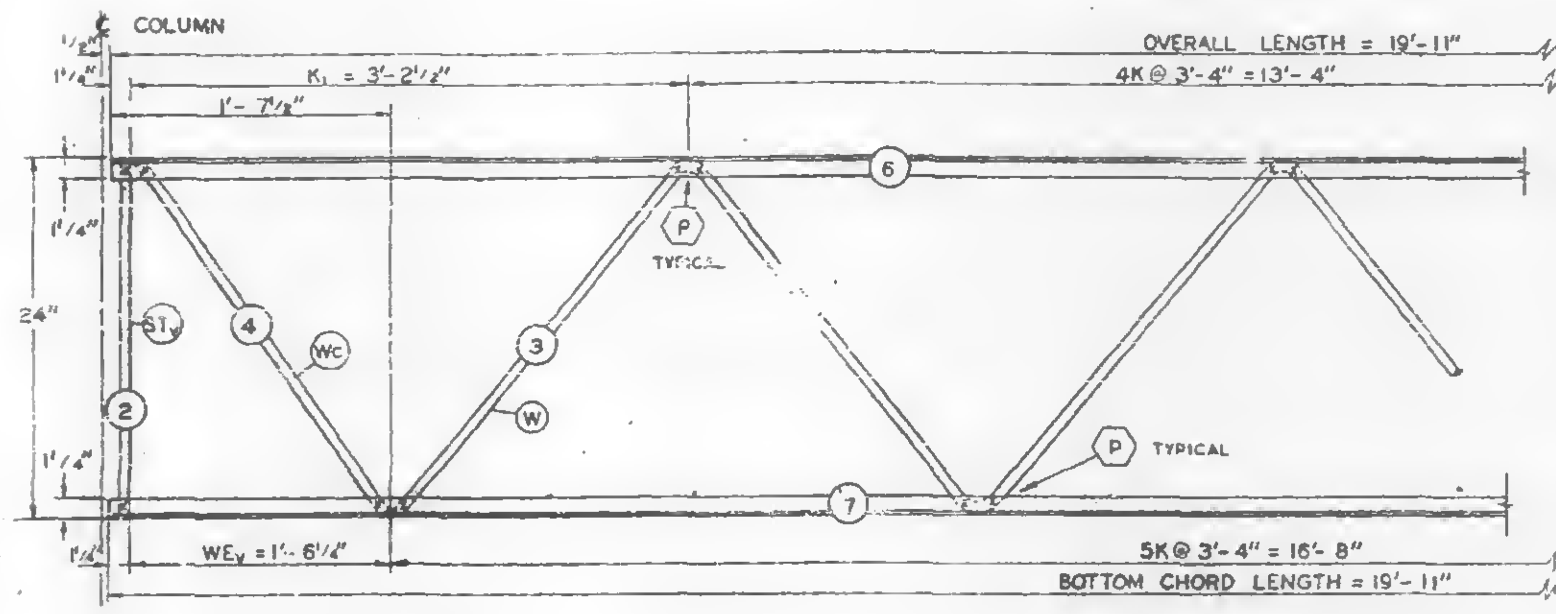
BRIDGING TRUSS 24T15 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10
PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A. DATE
DRAWN BY: gdc
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. ST215

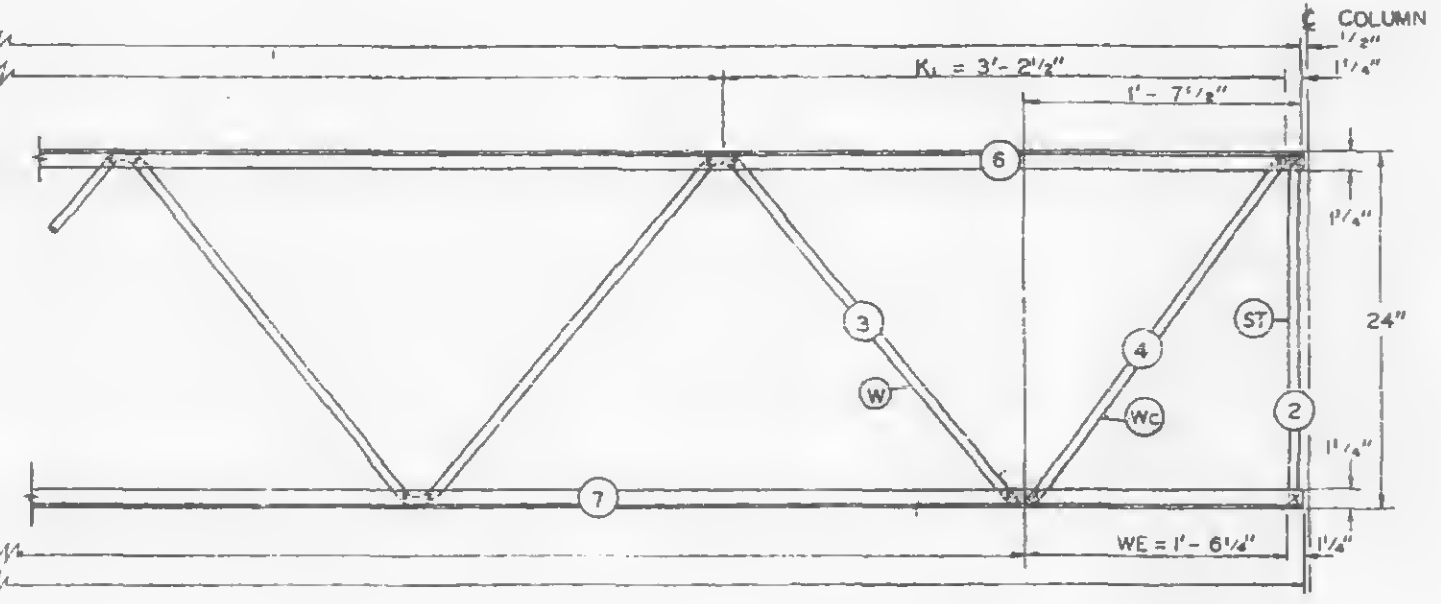

OVERALL LENGTH = 19'-11"
4K @ 3'-4" = 13'-4"
K1 = 3'-2½"
1'-7½"
1¼"
24"
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R27 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
P TYPICAL
WEv
WE
5K @ 3'-4" = 16'-8"
BOTTOM CHORD LENGTH = 19'-11"
℄ COL.
E_L END
E_S END

TRUSS ELEVATION

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL "K"	3'-4"	± 1 / 4"
PANEL "K1"	3'-2½"	± 1 / 4"
WEB DEPTH	23⅞"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"



E_L END ELEVATION



E_S END ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., ⬡A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

REF. DWGS.	
7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	4-15-68
7-AB4-16 & 18	5-17-68
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15-1911	6	A242	1½"x1¼"x.23"	19'-11"	7	A242	1½"x1¼"x.23"	19'-11"	3	A242	.98	30'-6½"	5K @ 3'-4" = 16'-8"	—	——	—	——	——			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5½"

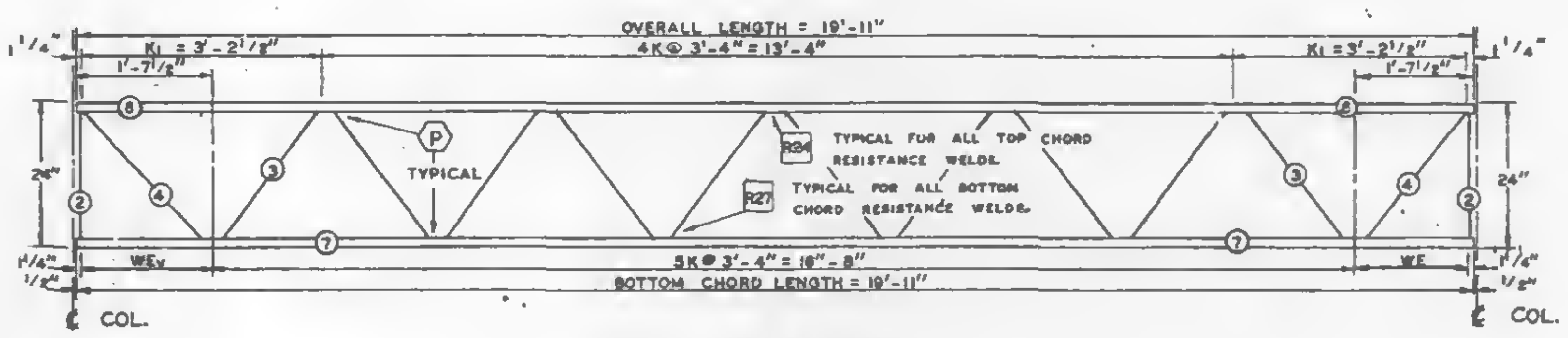
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "Wc"				
															MK. VS			MK. VS							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	—	——	——	——	1'-5¼"	—	—	—	——	2	A242	.98	1'-11¾"	——	—	——	——	—	——	4	A242	1	.98	2'-5½"

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10
PLATE
APPROVED FOR FABRICATION FOR PONYA
DATE 6/6/68
DRAWN BY gdc
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
LACLEDE STEEL CO.
DATE
CHECKED BY T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO BT215

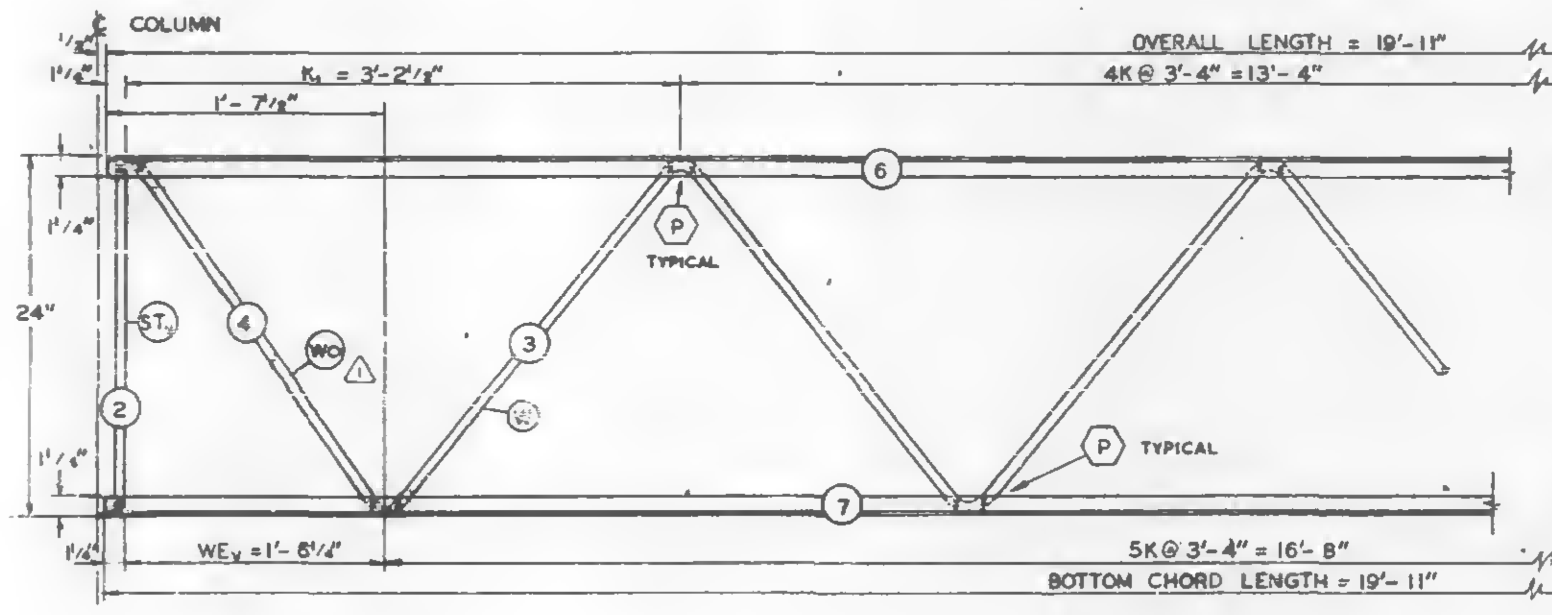

OVERALL LENGTH = 19'-11"
4K@ 3'-4" = 13'-4"
K₁ = 3'-2½"
1'-7½"
1¼"
24"
P
TYPICAL
R34 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R27 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
2
3
4
6
7
WEv
WE
5K@ 3'-4" = 16'-8"
BOTTOM CHORD LENGTH = 19'-11"
½"
℄ COL.

EL END

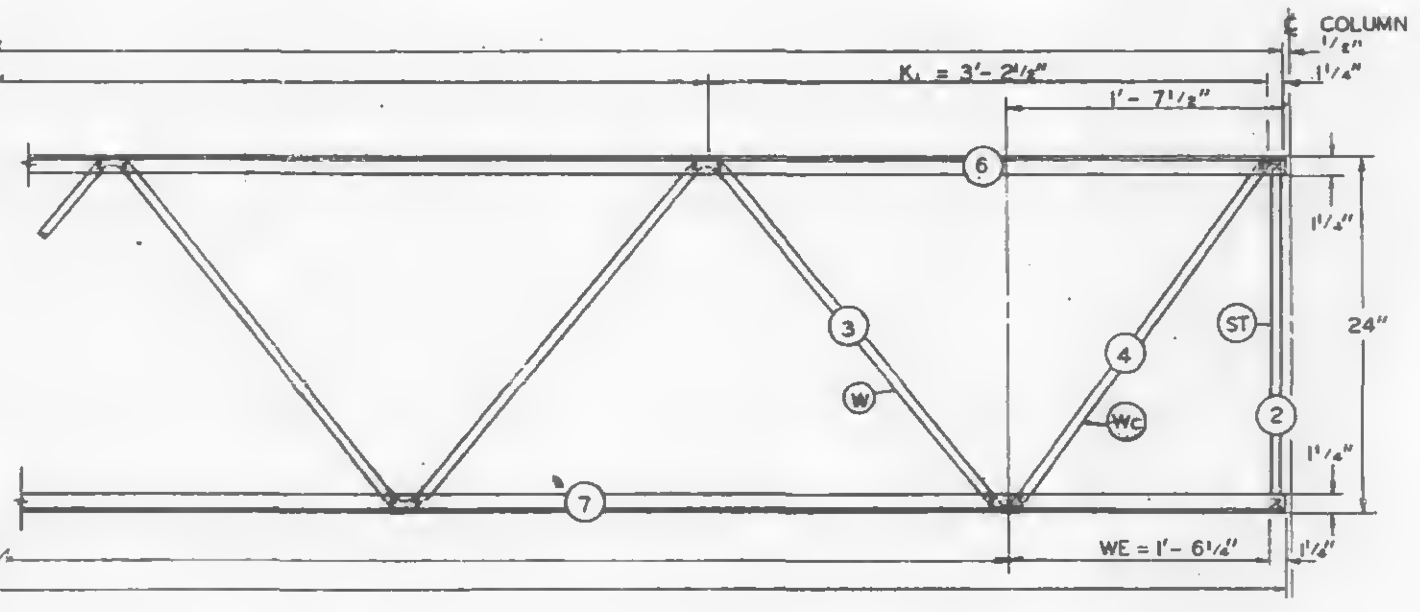
TRUSS ELEVATION

Es END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K₁"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



EL END ELEVATION



Es END ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-66
7-AB3-11	6-10-66 △
7-AB4-16 & 18	5-6-60 △1
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 1D001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15 - 1911	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1⅛"x1¼"x.23"	19'-11"	3	A242	.98	25'-7½" △2	5K@ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5½"

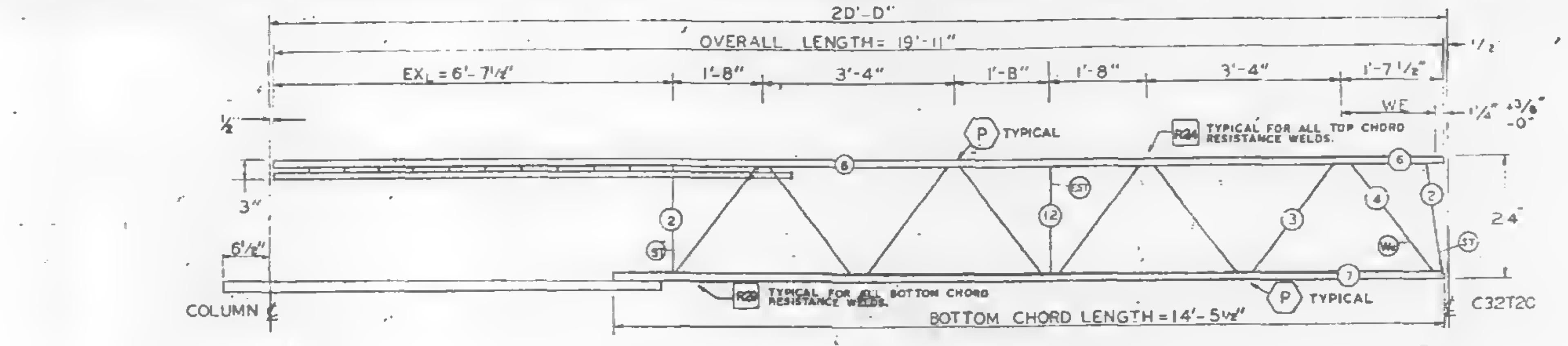
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "Wcv" △1				
															MK. VS			MK. VB							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5½"

NO.	DATE	REVISION	BY
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	REF. DRWG., WCV	T.M.C.

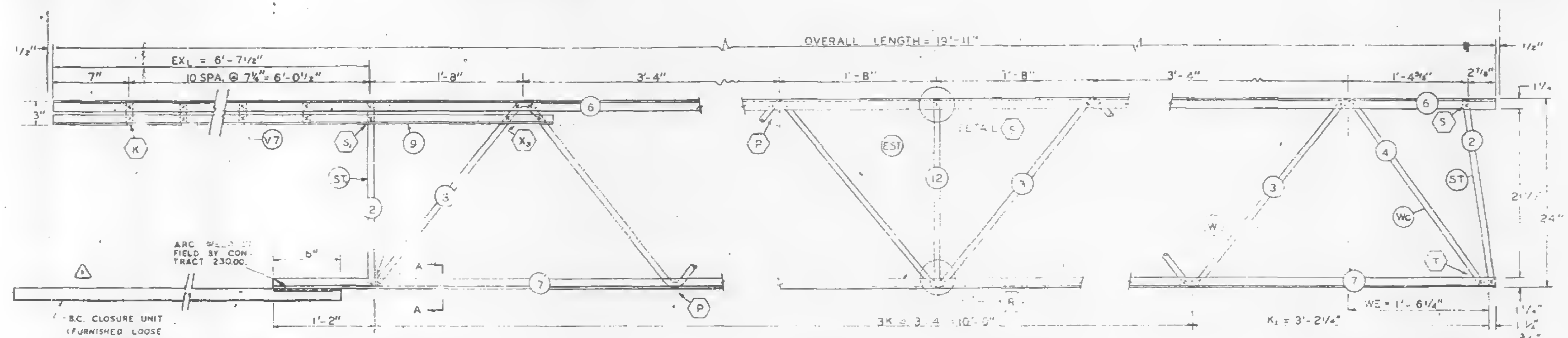
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10
PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A. DATE
DRAWN BY: gdc
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO BT215



TRUSS ELEVATION



-B.C. CLOSURE UNIT (FURNISHED LOOSE SEE DETAIL BELOW). SEE SHEET CD 214 FOR CONNECTION DETAILS.

ELEVATION AT EL END

ELEVATION AT [illegible] STRUT

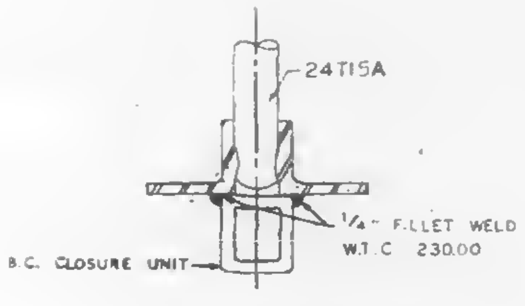
ELEVATION AT ES END

FABRICATION REQUIRMENTS

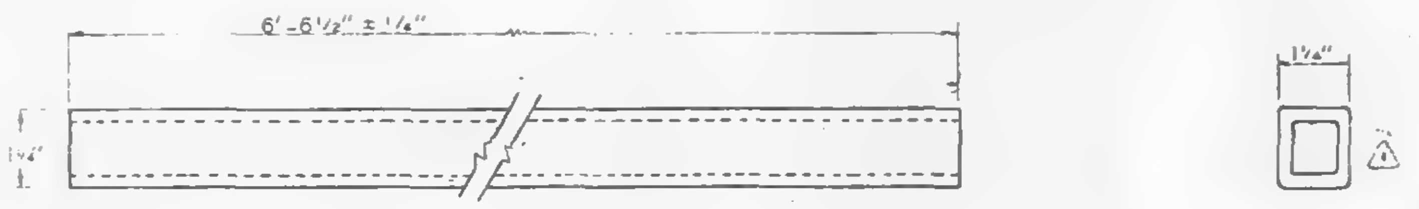
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD2D4 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A ⚠1



ELEVATION ⚠1

END VIEW

B.C. CLOSURE UNIT

REF. DWG.	
7-AB2-1	10-4-68
7-AB2-14	10-4-68
7-AB4-15.1	10-4-68
7-AB4-16 & 18	7-22-68
7-AB4-19 & 38	10-15-68
7-AB4-28 & 41	7-22-68

MATERIAL LIST FOR ⚠2 B.C. CLOSURE UNIT

PCS.	TYPE STEEL	SIZE	LENGTH
1	A242	1 1/4" x .187 WALL SQ. TUBING	6'-6 1/2"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO OF K	MK	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED		
24T15A-1911	6	A242	1 1/2"x1 1/4"x.275"	19'-11"	7	A242	1 1/2"x1 1/4"x.230	14'-5 1/2"	3	A242	.98	17'-11 1/4"	3 1/2 K @ 3'-4" = 11'-8"	12	A242	.98	1'-10 7/8"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T15A-1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	.98	1	2'-5 1/2"

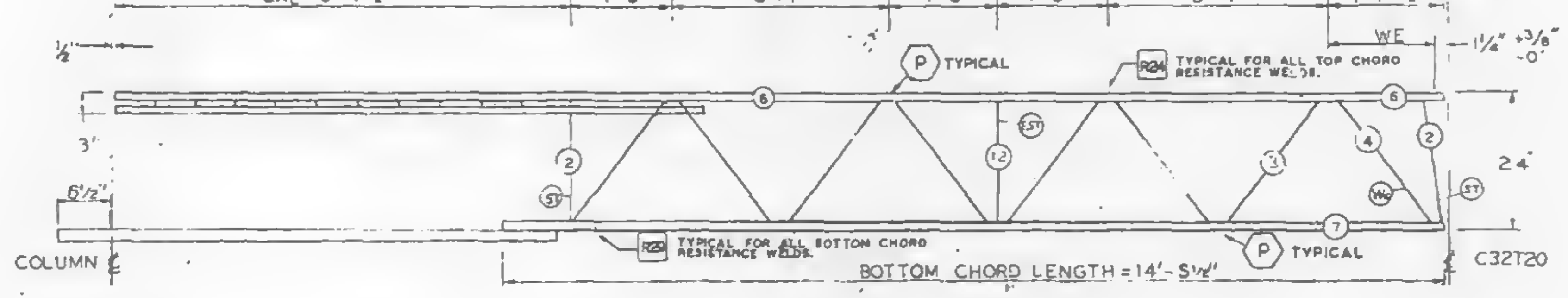
EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T15A-1911	9	A242	1 1/2"x1 1/4"x.275"	8'-8"	6'-7 1/2"	—	—	—	—	2	A242	.98	1'-11 3/4"	A242	.98	2 7/8"	10

NO.	DATE	REVISION	BY
⚠2	12-4-68	TYPE STEEL BOX ADDED	G.D.C.
⚠1	11-15-68	CLOSURE UNIT	LWH

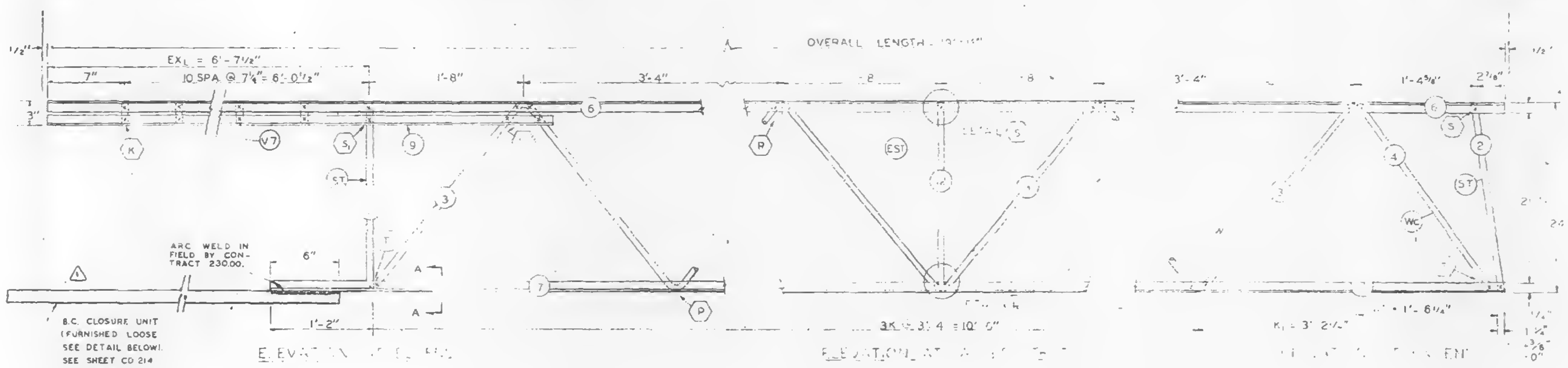
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

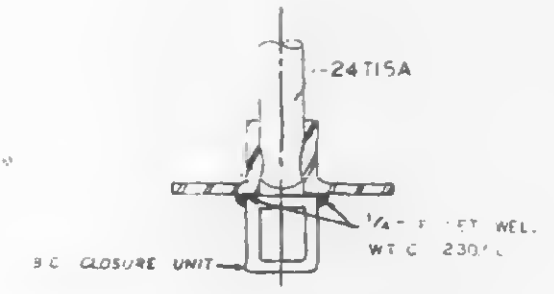
BRIDGING TRUSS 24T15A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-14
PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A DATE 12/11/68
DRAWN BY: [illegible]
DATE OCT. 28, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY T.M.CHURA
DATE OCT 28, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 215 A

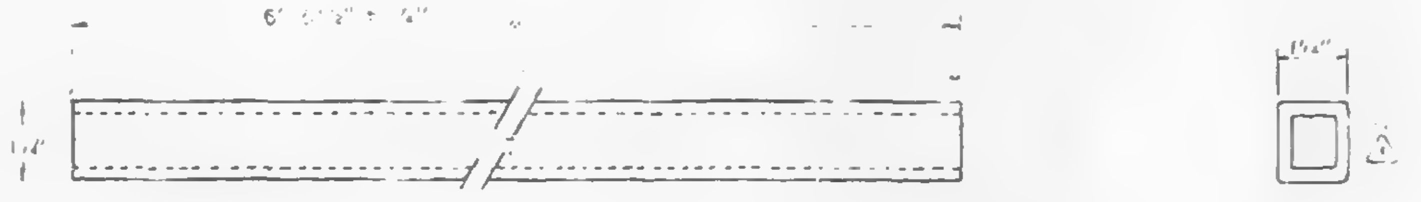


TRUSS ELEVATION





SECTION A-A



ELEVATION

END VIEW

B.C. CLOSURE UNIT

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2½"	± ¼"
WEB DEPTH	23⅞"	± ¼
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (X).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF. DWG.	
7-AB2-1	10-4-68
7-AB2-14	10-4-68
7-AB4-15.1	10-4-68
7-AB4-16 & 18	7-22-68
7-AB4-19 & 38	10-15-68
7-AB4-28 & 41	7-22-68

PAINT
LACLEDE ELECTROCOAT
RED NO 1600

△ MATERIAL LIST FOR B.C. CLOSURE UNIT

PCS.	SIZE	LENGTH	Type St
1	¼ x .197 WALL	6' 6½"	A242
	SQ TUBING		

SKILLING · HELLE
CHRISTIANSEN · ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
12/3/68 SK

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T15A-1911	6	A242	1½"x1¼"x.275"	[illegible]-11"	7	A242	1½"x1¼"x.230	14'-5½"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"	12	A242	.98	1'-10⅞"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T15A-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	.98	1	2'-5½"

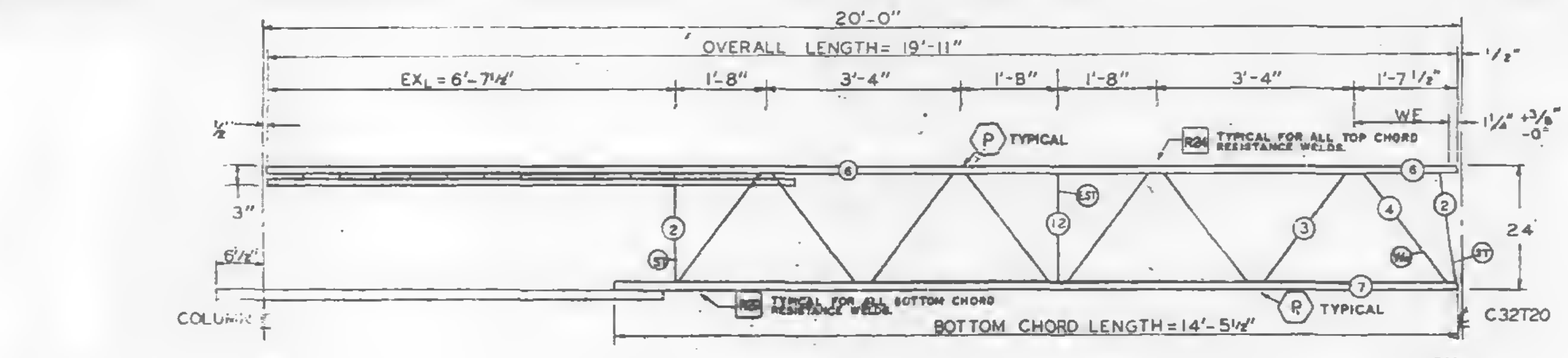
EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST1" STRUT				END STIFFENER			
															MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T15A-1911	9	A242	1½"x1¼"x.275"	8'-8"	6'-7½"	—	—	—	—	2	A242	.98	1'-11¾"	A242	.98	2⅞"	10

NO.	DATE	REVISION	BY
△1	11-15-68	CLOSURE UNIT	L.W.H

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

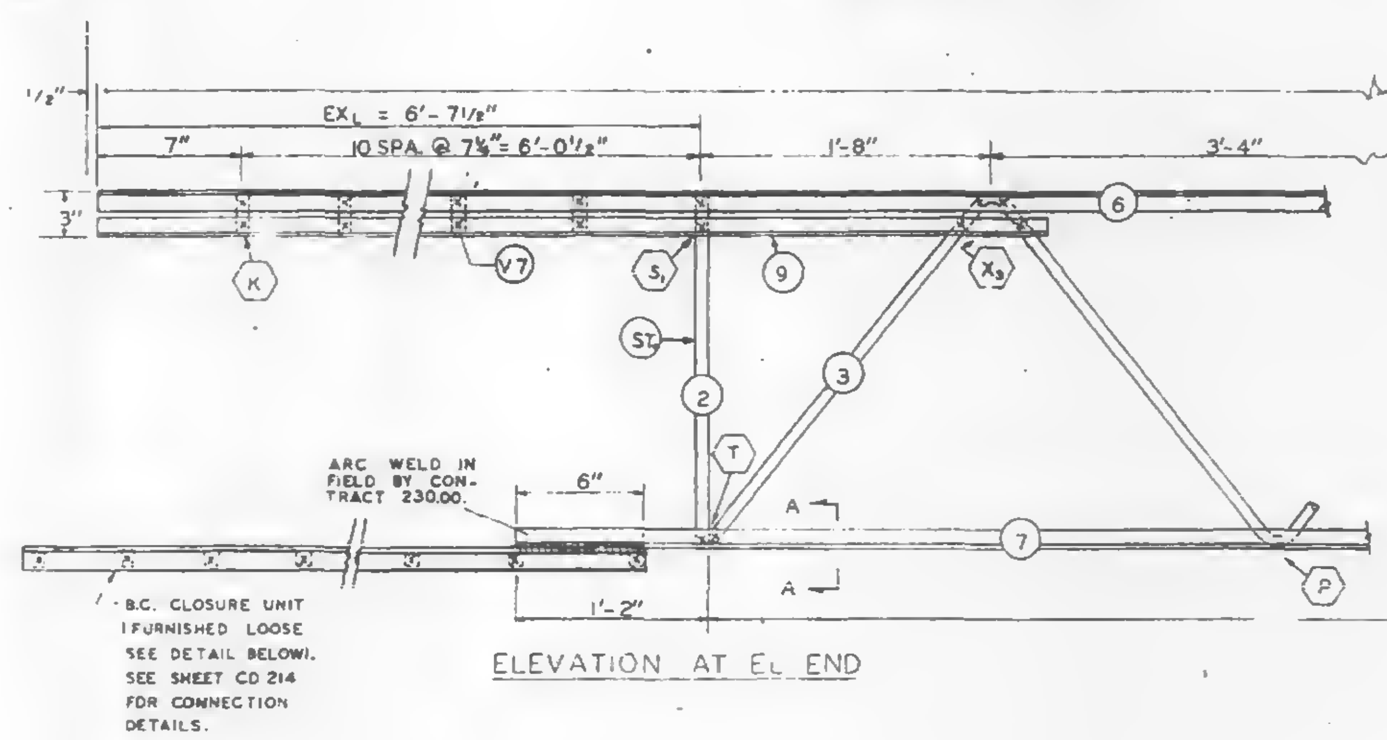
BRIDGING TRUSS 24T15A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO: 7-AB2-14
PLATE
APPROVED FOR FABRICATION BY ________ FOR PONYA
DATE
DRAWN BY: L.G.
DATE OCT. 28, 1968
APPROVED FOR FABRICATION BY ________ FOR FABRICATOR
DATE
CHECKED BY: T.M.CHURE
DATE OCT. 28, 1968
IN CHARGE OF, PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT 215 A

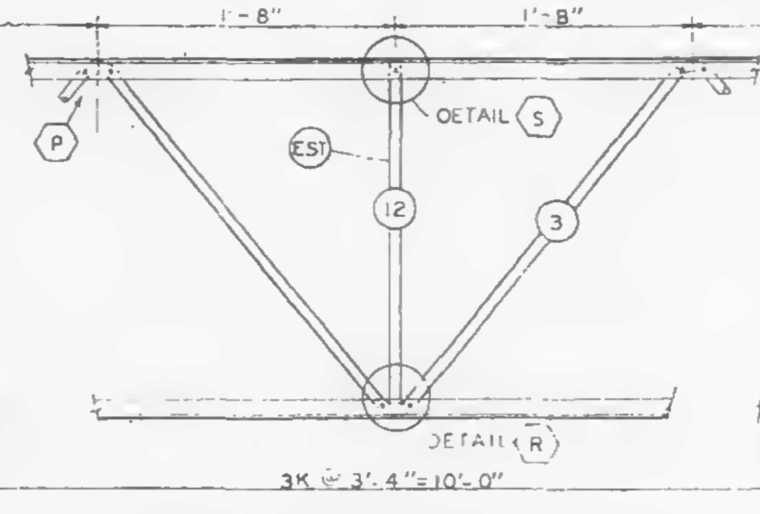


TRUSS ELEVATION

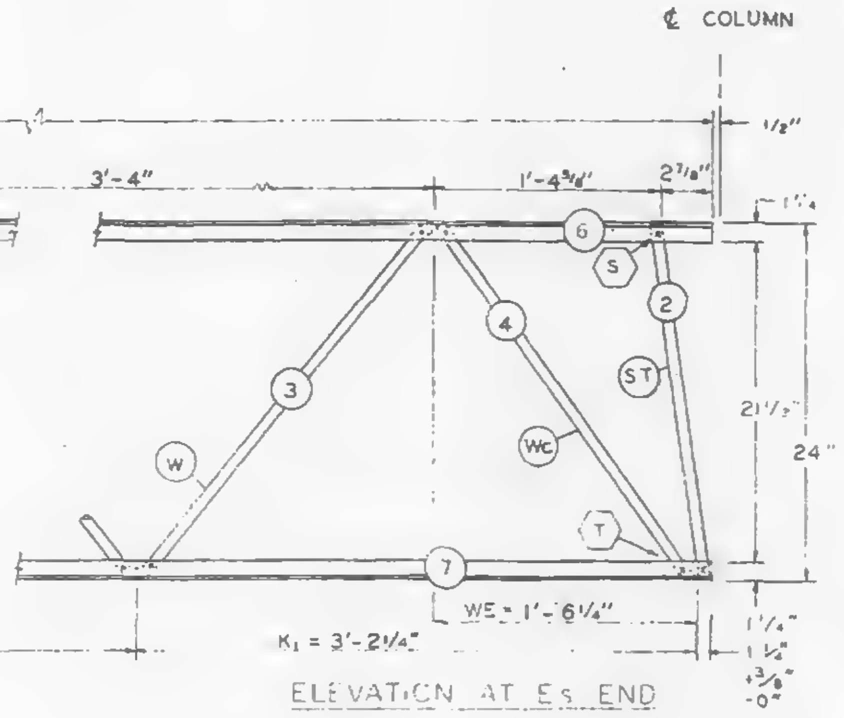
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅛"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K₁"	3'-2⅛"	± 1/4"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"


℄ COLUMN
½"
OVERALL LENGTH = 19'-11"
EXL = 6'-7½"
7"
10 SPA. @ 7⅛" = 6'-0½"
1'-8"
3'-4"
3"
K
V7
S₁
9
6
X₁
ST
3
2
T
ARC WELD IN FIELD BY CONTRACT 230.00.
6"
A
A
7
P
1'-2"
B.C. CLOSURE UNIT (FURNISHED LOOSE SEE DETAIL BELOW). SEE SHEET CD 214 FOR CONNECTION DETAILS.

ELEVATION AT EL END



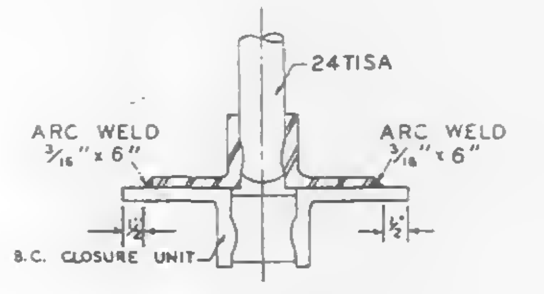
ELEVATION AT ADDED STRUT



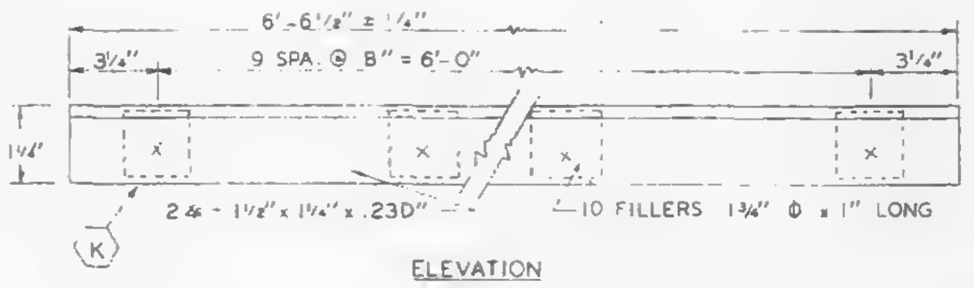
ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (x).
ALL WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▨)
ALL WELD DETAILS SHOWN ON SHEETS ST29D, ST291, AND ST292.

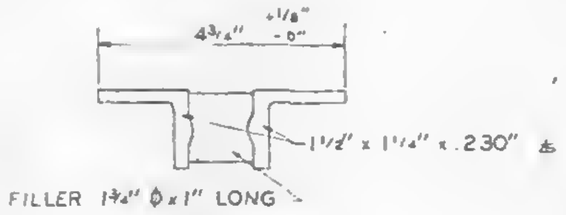
SEE SHEET CD2D4 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A



ELEVATION



END VIEW

B.C. CLOSURE UNIT

REF. DWG.
7-AB2-1 10-4-68
7-AB2-14 10-4-68
7-AB4-15.1 10-4-68
7-AB4-16 & 18 7-22-68
7-AB4-19 & 38 10-15-68
7-AB4-28 & 41 7-22-68

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1½"x1¼"x.23" ∠s	6'-6½"
10	1¾" ϕ FILLERS	1"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO OF K	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T15A-1911	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.230"	14'-5½"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"	12	A242	.98	1'-10⅞"	1		

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T15A-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	.98	1	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST₁" STRUT				END STIFFENER MK V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH "Y"		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	NO. REQ'D
	24T15A-1911	9	A242	1½"x1¼"x.275"	8'-8"	6'-7½"	—	—	—	—	2	A242	.98	1'-11¾"	A242	.98	2⅞"	10

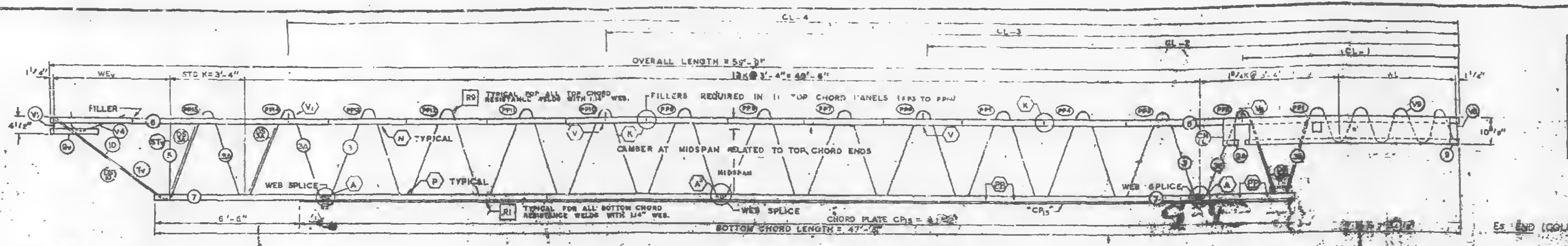
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

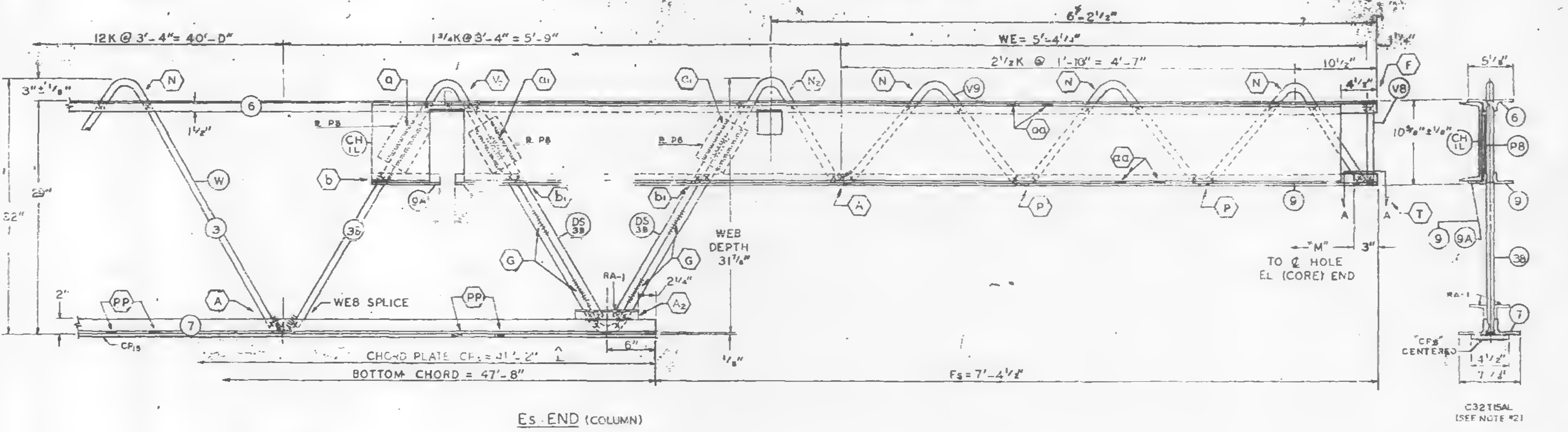
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-14	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 11/7/68	DRAWN BY DATE OCT. 28, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 28, 1968	
DETAILED BY LACLEDE STEEL CO.		FABRICATION CONT. NO W.T.C. 221	SHEET BT 215

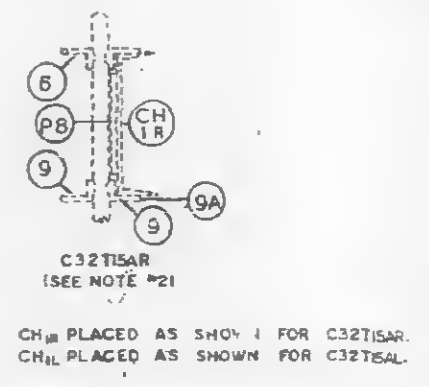

CL-4
CL-3
CL-2
(CL-1)
OVERALL LENGTH = 59'-9"
13K @ 3'-4" = 43'-4"
STD K = 3'-4"
WEv
1½"
4½"
FILLER
TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS WITH 1.14" WEB.
FILLERS REQUIRED IN 11 TOP CHORD PANELS
CAMBER AT MIDSPAN RELATED TO TOP CHORD ENDS
MIDSPAN
TYPICAL
WEB SPLICE
TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS WITH 1.14" WEB.
6'-6"
CHORD PLATE CP15 = 41'-2"
BOTTOM CHORD LENGTH = 47'-8"
10⅝"
Es END (COLUMN)

EL END (CORE)

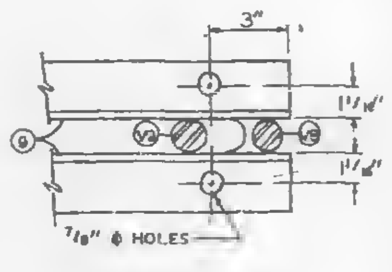
TRUSS ELEVATION



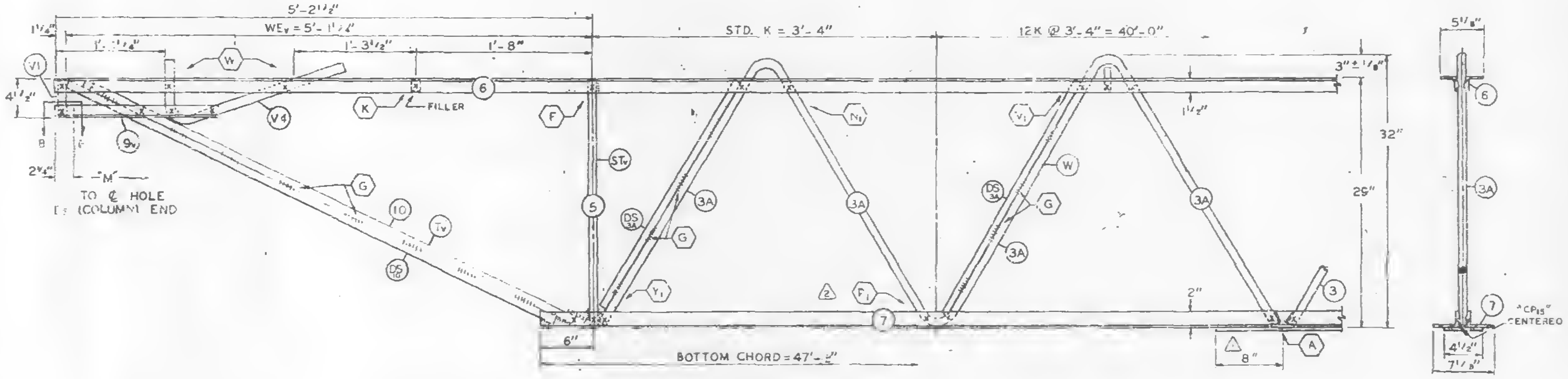
Es END (COLUMN)



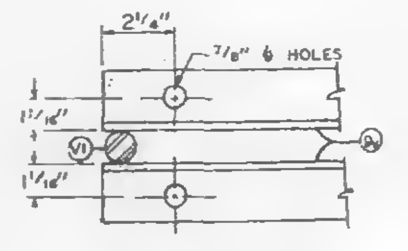
CH1R PLACED AS SHOWN FOR C32T15AR.
CH1L PLACED AS SHOWN FOR C32T15AL.



SECTION A-A



EL END (CORE)



SECTION B-B

FABRICATION REQUIREMENTS

	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2¹/₁₆"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	59'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RI.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, ST292 & ST293.
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.
SEE SHEET ST 295 FOR V1 & V4 DETAILS.

NOTE 2

ALL DETAILS & ELEVATIONS SHOWN FOR C32T15AL TRUSSES ARE APPLICABLE TO C32T15AR TRUSSES WITH CHANNEL CH1R AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.

NO.	DATE	REVISION	BY
2	11-7-68	AS NOTED	G.D.C.
1	10-31-68	CP15	LWH

2 REF. DRWG.

7-AB1-14	10-4-68
7-AB1-54	10-[illegible]-68
7-AB1-53	7-22-68
7-AB3-2	1-3-68
7-AB3-24	8-15-68
7-AB4-17 & 17.2	10-4-68
SA-124	10-11-68
7-AB1-55	10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER		"M" C/C HOLES	CHORD PLATE 1				CONNECTION FILLER			CHANNEL PLATES					REINFORCING ANGLES				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO.	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH
24T15AL-599	6	A242	2"x1½"x.37"	59'-[illegible]"	7	A36	3"x2"x.37"	47'-8"	3 3A 3B	A242 A242 A242	1.14" 1.14" 1.14"	68'-5¼" 12'-5½" 10'-7⅝"	11K @ 3'-4" = 36'-8" 2K @ 3'-4" = 6'-8" 1¾K @ 3'-4" = 5'-9"	12	1.14	59'-3¾"	CP15	A36	4½x.39"	41'-2"	4	1.14	3"	PB	A36	3	[illegible]	5½"	RA1	A36	2	3"x2"x.37"	7½"

COLUMN END

Es END	TRUSS DESIGNATION	BEARING ANGLES					WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER MK. V8			MK. V9			MK. V10			CHANNEL (SEE NOTE #2)			
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
	24T15AL-599	9 9A	A242 A242	2"x1½"x.25" 2"x1½"x.25"	2 1	6'-5" 8½"	5'-[illegible]	DS	A242	1.14	2'-6¾"	-	—	—	—	A242	1.14	10½"	A242	1.14	8'-3⅞"	—	—	—	CH1R CH1L	A36 A36	10⊏30 10⊏30	10'-0" 10'-0"

CORE END

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				VERTICAL "STv" STRUT				END STIFFENER MK. V1			MK. V2			MK. V4			DOUBLE STRUT				DOUBLE STRUT				DOUBLE STRUT			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	DIA.	LENGTH
	24T15AL-599	9v	A242	2"x1½"x.25"	1'-7"	5'-1¼"	10	A242	1.14	5'-4⅞"	5	A242	1.14	2'-4⅞"	A242	1.14	4⅜"	—	—	—	A242	1.14	2'-2½"	DS10	A242	.75	5'-4⅞"	DS3A	A242	.75	2'-6¾"	—	—	—	—

CHECK DIMENSION FOR TRUSS FAB.

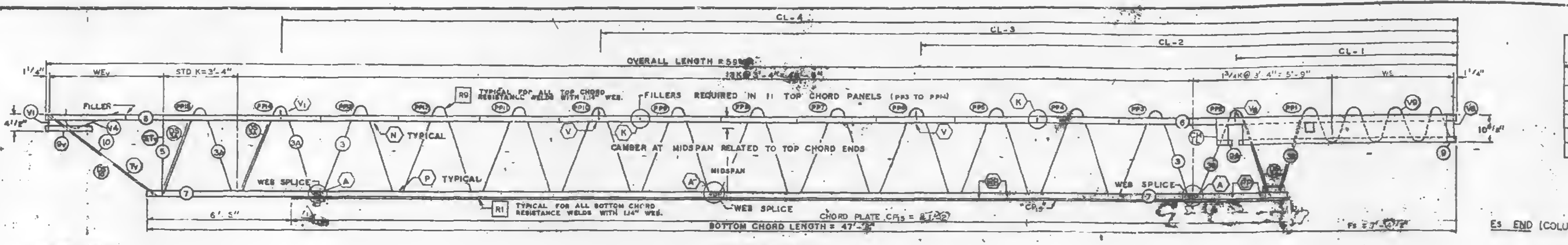
LOCATION OF TRANS. TRUSS				
CL-1	CL-2	CL-3	CL-4	Fs
9'-6½"	22'-10½"	36'-2½"	49'-6½"	7'-4½"

FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FLOOR TRUSS C32T15AL x 59'-9" LONG (SEE NOTE #2)
WORLD TRADE CENTER TOWERS A & B

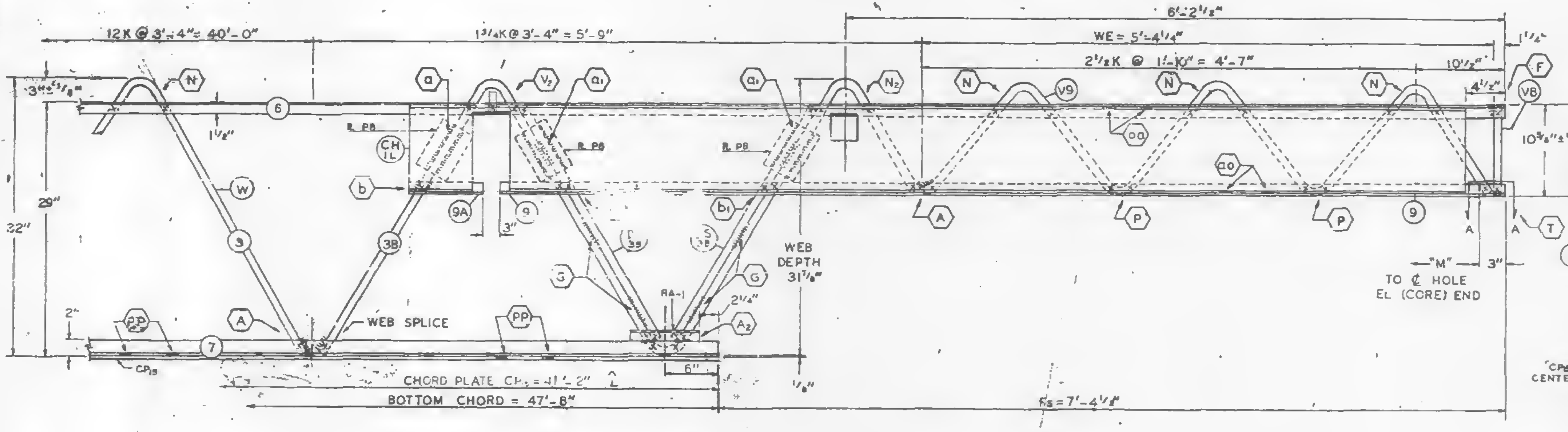
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB1-14	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 11/18/68	DRAWN BY: gdc DATE OCT. 1, 1968	
APPROVED FOR FABRICATION BY: James White FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 1, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. ST 215AL

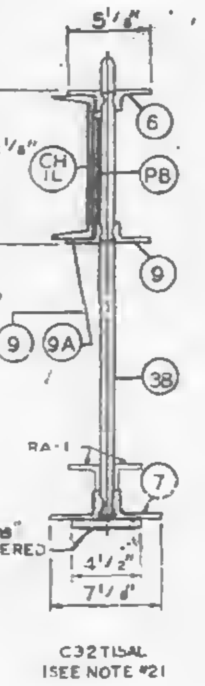


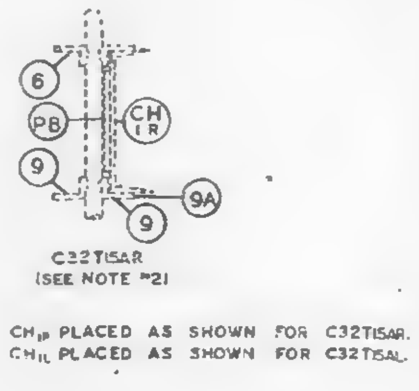
TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2'/[illegible]"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	59'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"



Es END (COLUMN)

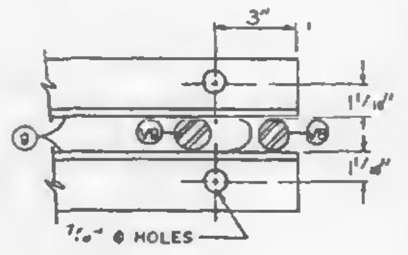



6
PB
9
CH 1R
9
9A
C32T1SAR (SEE NOTE #2)
CH1R PLACED AS SHOWN FOR C32T1SAR.
CH1L PLACED AS SHOWN FOR C32T1SAL.

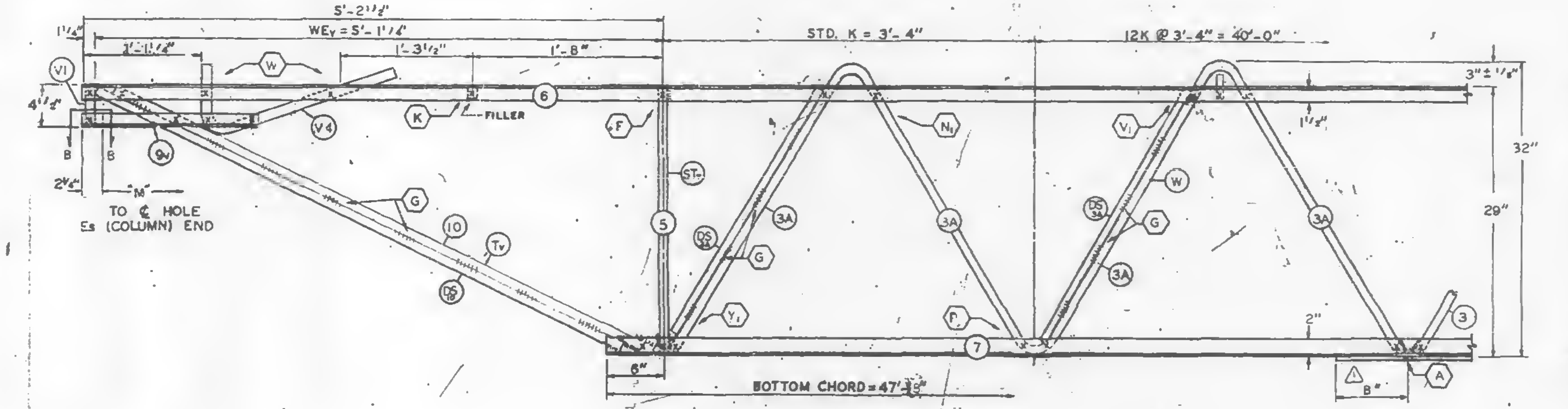
ALL PANEL POINTS RESISTANCE WELDED. (✕).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (▨).
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE
RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R1.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291,
ST292 & ST293.
ALL CHANNEL DETAILS SHOWN ON SHEET ST407.
CHORD PLATE DETAILS SHOWN ON SHEET ST283.
SEE SHEET ST295 FOR V1 & V4 DETAILS.

NOTE 2

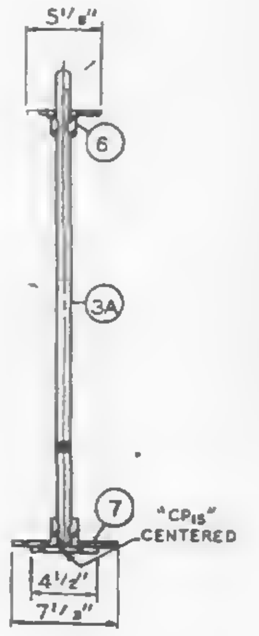
ALL DETAILS & ELEVATIONS SHOWN FOR C32T1SAL
TRUSSES ARE APPLICABLE TO C32T1SAR TRUSSES
WITH CHANNEL CH1R AND BEARING ANGLE 9A
PLACED ON OPP. HAND AS SHOWN.

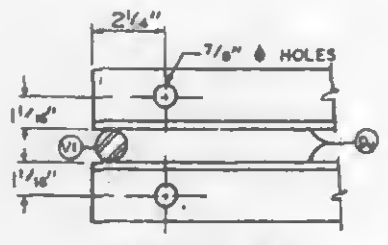


SECTION A-A



EL END (CORE)





SECTION B-B

NO.	DATE	REVISION	BY
△1	10-31-68	CP15	LWH

REF. DRWG.
7-A81-16 8-15-68
7-A81-54 8-15-68
7-A81-53 & 55 7-22-68
7-A83-2 1-3-68
7-A83-24 8-15-68
7-A84-17 & 17.2 8-15-68
SA-124 8-1-68

PAINT

LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER		"M" C/C HOLES	CHORD PLATE △1				CONNECTION FILLER			CHANNEL PLATES					REINFORCING ANGLES				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO.	DIA.	LENGTH	MK	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH
24T1SAL-S99	6	A242	2"x1½"x.37"	59'-5"	7	A36	3"x2"x.37"	47'-8"	3 3A 3B	A242 A242 A242	1.14" 1.14" 1.14"	[illegible] [illegible] 10'-[illegible]	11K@3'-4" = 36'-[illegible] 2K@3'-4" = 6'-8" 1¾K@3'-4" = 5'-9"	12	1.14	59'-3¾"	CP15	A36	[illegible]	41'-2"	4	1.14	3"	PB	A36	3	[illegible]	5½"	RA1	A36	2	3"x2"x.37"	7½"

COLUMN END

Es END	TRUSS DESIGNATION	BEARING ANGLES					WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER MK. V8			END STIFFENER MK. V9			END STIFFENER MK. V10			CHANNEL (SEE NOTE #2)			
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
	24T1SAL-S99	9 9A	A242 A242	2"x1½"x.25" [illegible]	2 1	[illegible] [illegible]	5'-4¼"	DS	A242	1.14	2'-6¾"	—	—	—	—	A242	1.14	10½"	A242	1.14	8'-3⅞"	—	—	—	CH1L CH1R	A36 A36	10 C 30 10 C 30	10'-0" 10'-0"

EL END

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				VERTICAL "STv" STRUT				END STIFFENER MK. V1			END STIFFENER MK. V2			END STIFFENER MK. V4			DOUBLE STRUT				DOUBLE STRUT				DOUBLE STRUT			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	DIA.	LENGTH
	24T1SAL-S99	9v	A242	2"x1½"x.25"	1'-7"	5'-1¼"	10	A242	1.14	5'-4⅞"	5	A242	1.14	2'-4¾"	A242	1.14	4⅜"	—	—	—	A242	1.14	2'-2½"	DS	A242	.75	5'-4⅞"	DS	A242	.75	2'-6¾"	—	—	—	—

CHECK DIMENSION FOR TRUSS FAB.

LOCATION OF TRANS. TRUSS				
CL-1	CL-2	CL-3	CL-4	Fs
9'-6½"	22'-10½"	36'-2½"	49'-6½"	7'-4½"

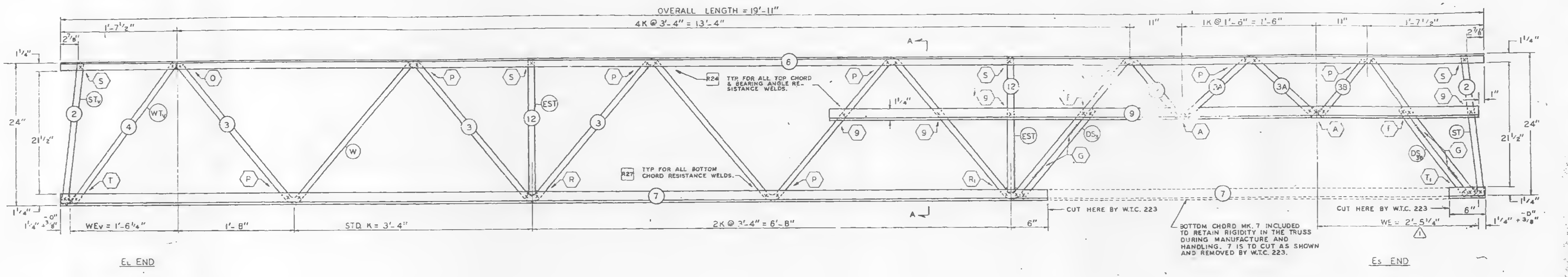
FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER -, N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

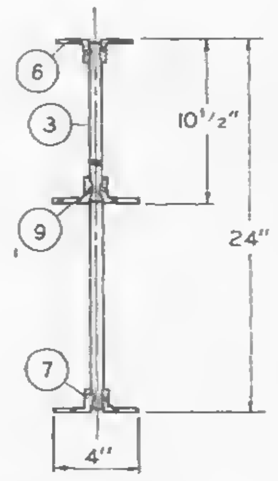
FLOOR TRUSS C32T1SAL x 59'-9" LONG (SEE NOTE #2)
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A81-14	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 11/7/68	DRAWN BY: gdc DATE OCT. 1, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE OCT. 1, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO. W.T.C 221	SHEET NO. ST 215AL

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL "K"	3'-4"	± 1 / 4"
WEB DEPTH	23 7/8"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"





SECTION A-A

1	5-15-69	AS NOTED	G.D.C.
NO	DATE	REVISION	BY

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (IIIIIII).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., (A).
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R27.

PAINT

LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		VERTICAL "EST" STRUT					CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
24T16A - 1911	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.23"	19'-11"	3 3A 3B	A242 A242 A242	.98 .98 .98	2'-8¾" 2'-4¾" 3'-8¼"	4 8K @ 3'-4" = 14'-3" 1K @ 1'-6" = 1'-6" 5/8K @ 3'-4" = 2'-6½"			12	A242	2	.98	1'-10⅞"	—	—	—	—	DS_3	A242	.98	1'-6¾"

ES END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH	1	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 1911	2	A242	.98	1'-11¾"	2'-5¼"	9	A242	1½"x1¼"x.275"	9'-1½"	DS_{3B}	A242	.98	1'-6¾"

EL END	TRUSS DESIGNATION	INCLINED "ST_v" STRUT				WE_v	WEB "WT_v"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 1911	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	.98	2'-5½"

REF. DRWGS.		
	7-AB2-14	10-4-68
	7-AB3-30	10-4-68
	7-AB3-31	10-4-68
	7-AB3-24	8-15-68
	7-AB4-17.7	10-4-68
	7-AB4-17.1	10-4-68
	SA-124	1-6-68
	7-AB2-1	1-8-68

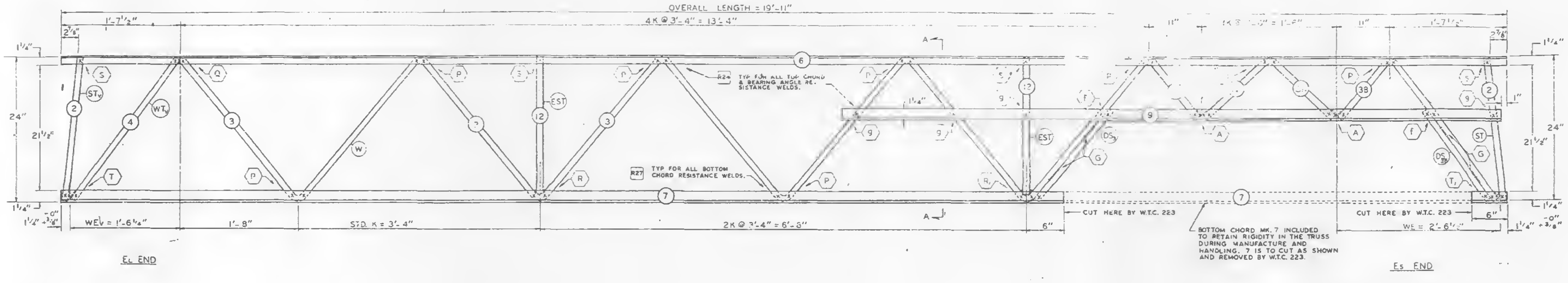
BRIDGING TRUSS DETAILS
FOR
[illegible] CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A & B

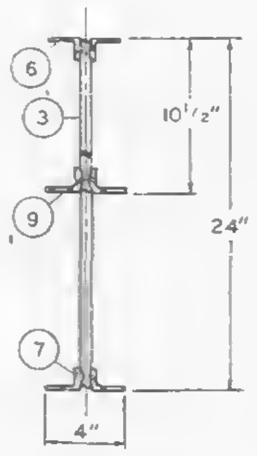
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-14	PLATE
APPROVED FOR FABRICATION BY White FOR P.O.N.Y.A.	DATE 6/4/69	DRAWN BY: gdc DATE, APRIL 14, 1969	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE APRIL 14, 1969	IN CHARGE OF PROD. DEV.
[redacted] DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT 216 A

FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	D"	+ 3 / 8"
DESIGN DEPTN	24"	± 1 / 4"
PANEL "K"	3'-4"	± 1 / 4"
WEB DEPTH	23 7/8"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"



BOTTOM CHORD MK. 7 INCLUDED TO RETAIN RIGIDITY IN THE TRUSS DURING MANUFACTURE AND HANDLING. 7 IS TO CUT AS SHOWN AND REMOVED BY W.T.C. 223.



SECTION A-A

NO.	DATE	REVISION	BY

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▥).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., ⬡A.
ALL WELD DETAILS SHOWN ON SHEET ST 29D, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R27.

PAINT
LACLEDE ELECTROCOAT
RED NO 10DD1

VOID

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		VERTICAL "EST" STRUT					CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
24T16A - 1911	6	A242	1 1/2"x1 1/4"x.275"	19'-11"	7	A242	1 1/2"x1 1/4"x.23"	19'-11"	3 3A 3B	A242 A242 A242	.98 .98 .98	21'-8 3/4" 2'-4 3/4" 3'-8 1/4"	4 1/4K @ 3'-4" = 14'-3" 1K @ 1'-6" = 1'-6" 5/9K @ 3'-4" = 2'-6 1/2"			12	A242	2	.98	1'-10 7/8"	—	—	—	—	DS3	A242	.98	1'-6 3/4"

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 1911	2	A242	.98	1'-11 3/4"	2'-6 1/2"	9	A242	1 1/2"x1 1/4"x.275"	9'-1 1/2"	DS3B	A242	.98	1'-6 3/4"

EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv	WEB "WTv"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 1911	2	A242	.98	1'-11 3/4"	1'-6 1/4"	4	A242	.98	2'-5 1/2"

REF. DRWGS.

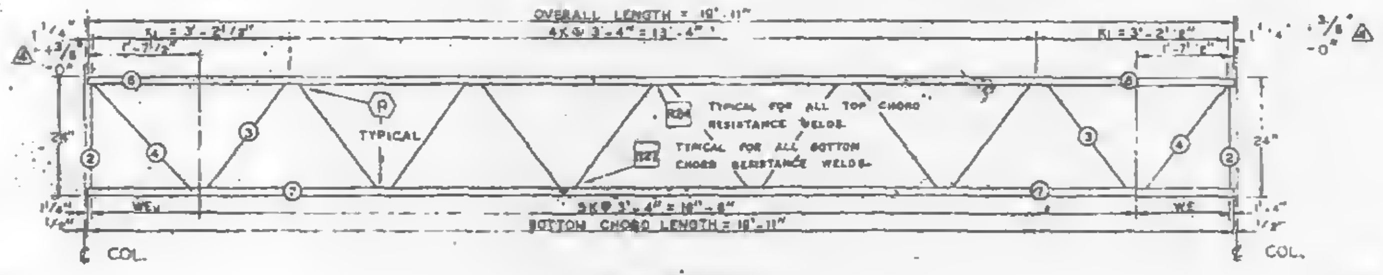
7-AB2-14	10-4-68
7-AB3-30	10-4-68
7-AB3-31	10-4-68
7-AB3-24	8-15-68
7-AB4-17.7	10-4-68
7-AB4-17.1	10-4-68
SA-124	1-6-69
7-AB2-1	1-6-69

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-14	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY gdc DATE APRIL 14, 1969	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE APRIL 14, 1969	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT 216 A

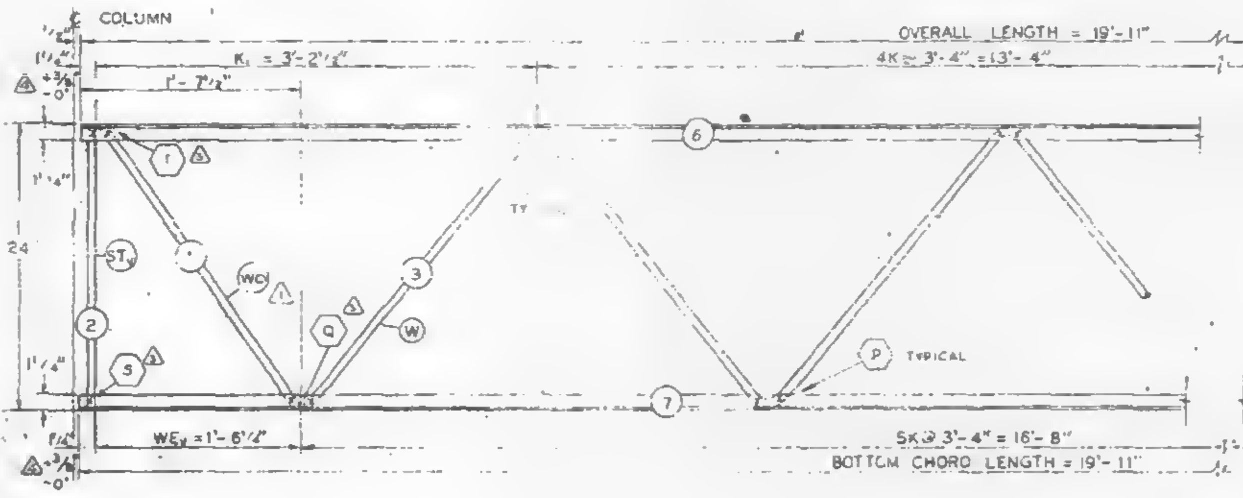

OVERALL LENGTH = 19'-11"
4K@ 3'-4" = 13'-4"
K₁ = 3'-2½"
1'-7½"
+3/8" -0"
1¼"
24"
TYPICAL
R24 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R24 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
WEv
WE
5K@ 3'-4" = 16'-8"
BOTTOM CHORD LENGTH = 19'-11"
COL.
COL.

Ee END

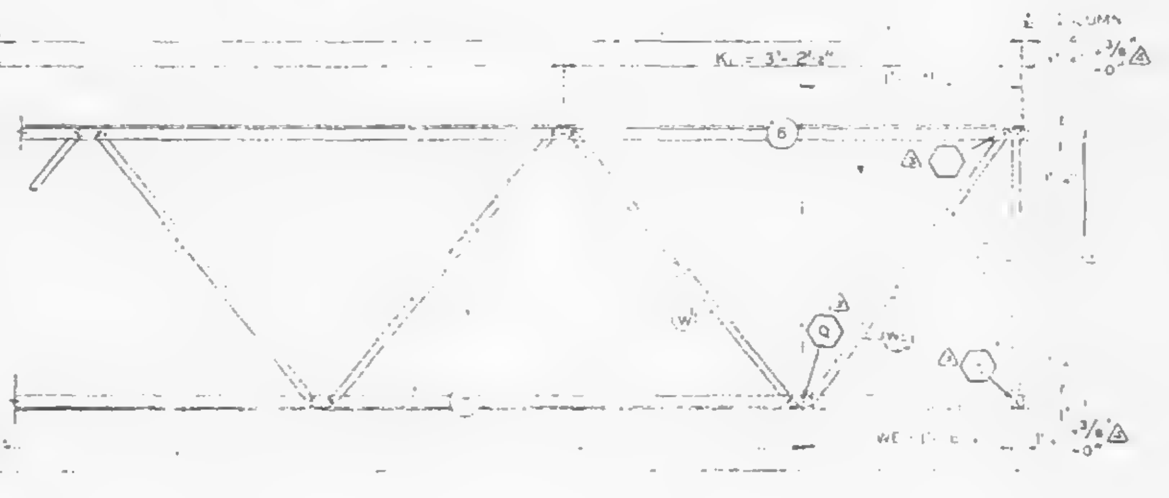
TRUSS ELEVATION

Es END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K₁"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



Ee END ELEVATION



Es END ELEVATION

[illegible] RESISTANCE WELDED (×).
[illegible] INDICATED AT SHADED AREAS
[illegible] CHORD WEB SPLICES (▬).
[illegible] SHOWN ON SHEETS ST 290
[illegible] INDICATE WELD DETAILS, i.e. (A).
[illegible] NUMBERS IN SQUARES INDICATE RE-[illegible] WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. R24.

REF. DWGS.

7-AB2-?	4-1-68
7-AB2-10	4-15-68
7-AB2-11	5-10-68
7-AB4-16 & 18	5-6-68
7-AB4-28 & 41	1-3-68
7-AB4-36	4-1-68

PAINT:
LACLEDE [illegible]
RED [illegible]

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T16 - 1911	6	A242	1¼"x1¼"x.275	19'-11"	7	A242	1¼"x1¼"x.23	19'-11"	3	A242	.98	28'-7¼"	5K@ 3'-4"=16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5⅛"

Ee END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "Wc"				
															MK. VS			MK. VS							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5⅛"

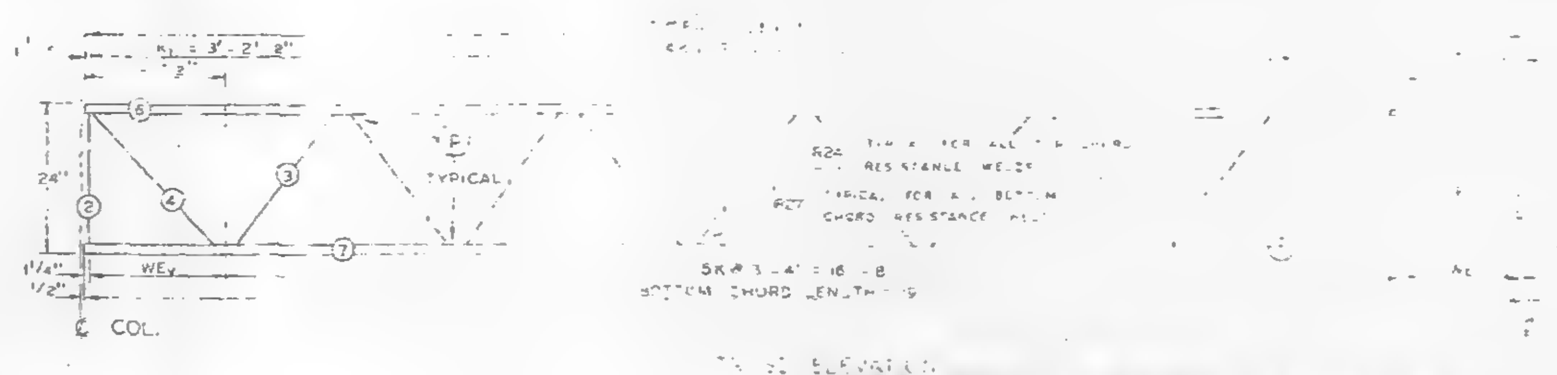
NO.	DATE	REVISION	BY
4	9-6-68	END DIST. ②	T.M.C.
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB	T.M.C.
1	6-28-68	REF. DRWG. Wcv	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

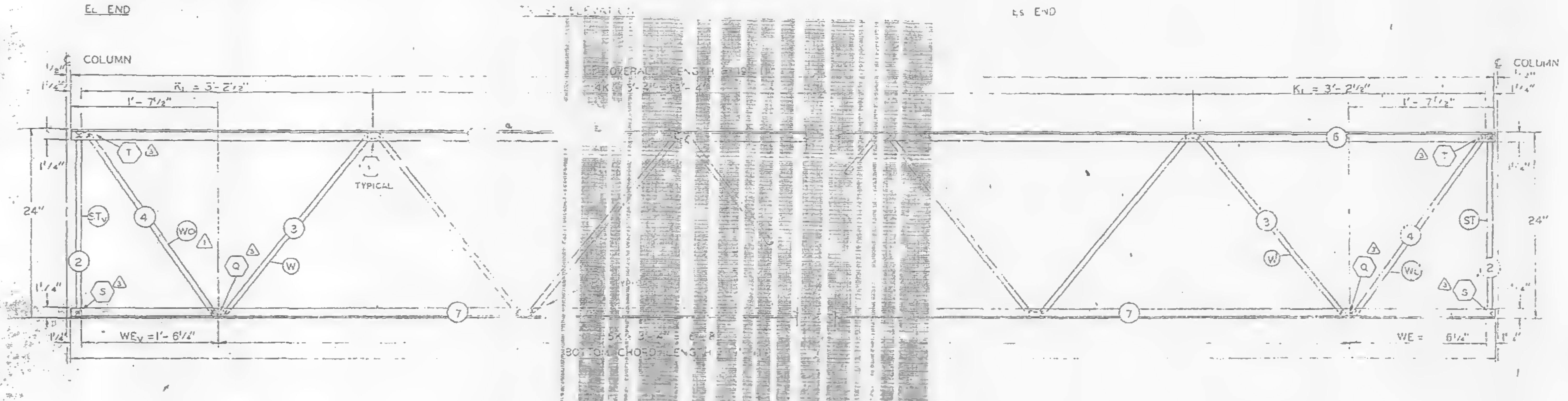
BRIDGING TRUSS 24T16 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-10	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A.	DATE 9/10/68	DRAWN BY: [illegible] DATE: MAY 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.OSIRA DATE: MAY 24, 1968	IN CHARGE OF: [illegible]
DETAILED BY [illegible]		FABRICATION CONT NO W.T.C. 221	SHEET NO. BT216



FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



EL END ELEVATION

ES END ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 29D
AND ST 29I.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., ⬡A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., $\boxed{R24}$.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	5-10-68 △1
7-A94-16 & 18	5-6-68 △1
7-AB4-28 & 41	4-3-68
7-AB4-38	4-1-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
[illegible]	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.23"	[illegible]	3	A242	.98	25'-7½"	5K@3'-4" =16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24T16 - 1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5½"

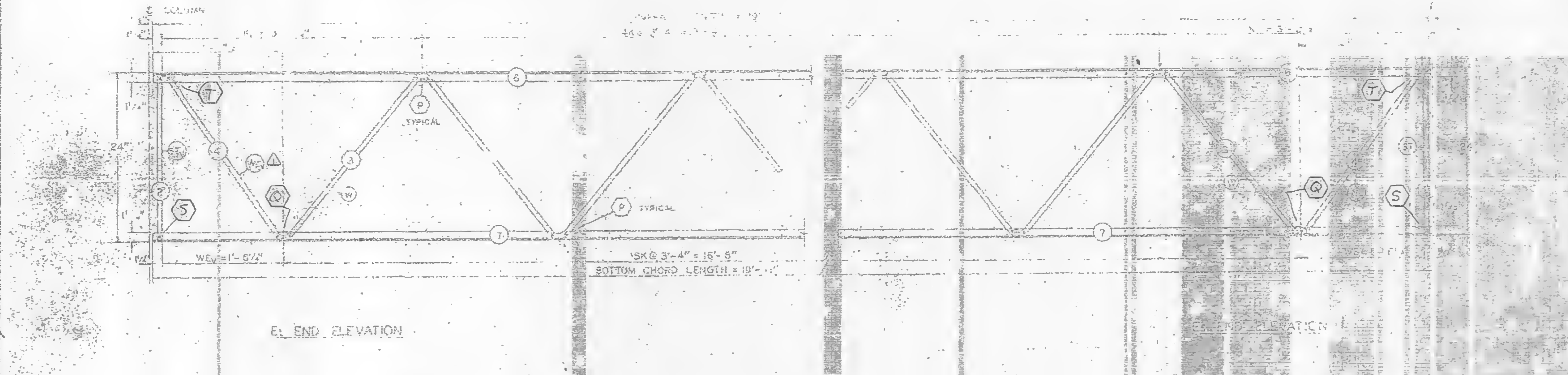
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_v	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER						WEB "WCV" △1				
															MK. VS			MK. V6							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA	LENGTH
	24T16 - 1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—		—	4	A242	1	.98	2'-5½"

NO	DATE	REVISION	BY
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	REF. DRWG. WCV	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING [illegible] 24T16 x [illegible] LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10
PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA
DATE 7/9/68
DRAWN BY gdc
DATE MAY 24 1968
APPROVED FOR FABRICATION BY FABRICATOR
DATE
CHECKED BY T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO. BT210



EL END ELEVATION

ER END ELEVATION

ALL [illegible] WELDED [illegible]
[illegible] AREAS
AND AT [illegible] CHORD [illegible] SPLICES [illegible]
[illegible] SHOWN ON SHEETS [illegible]
[illegible]

LETTERS [illegible] INDICATE WELD DETAIL
LETTERS AND NUMBERS IN SQUARES INDICATE
[illegible] WELD STRENGTH [illegible] IN [illegible]
[illegible] PROGRAM [illegible]

BRIDGING TRUSS DETAILS

TRUSS DESIGNATION	TOP CHORD				BOTTOM CHORD				MAIN WEB					VERTICAL					TRUSS DATA	FILLER	
	MK.	STEEL	[illegible]	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	[illegible]		NO.	DIA.
24T16 - 191	6	[illegible]	[illegible]	[illegible] 11"	7	A242	[illegible]	[illegible]	3	A242	.98	30'-8¾"	5K @ 3'-4"	[illegible]	—	—	—	—		—	—

ER END	TRUSS DESIGNATION	[illegible]	END STRUT				WEB				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 191	[illegible]	2	A242	.39	1'-11⅞"	4	A242	1	.98	2'-5½"

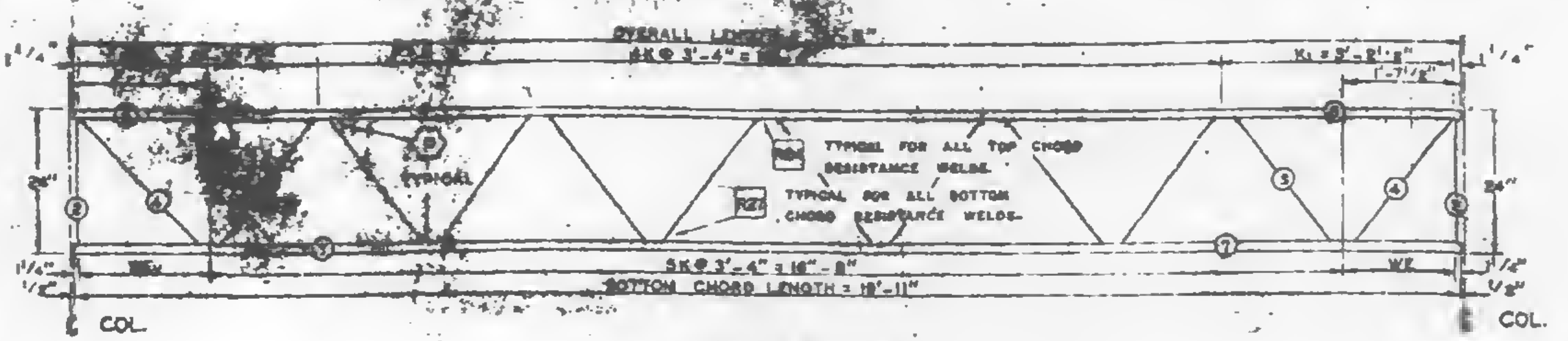
EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "DT" STRUT				VERTICAL "ST" STRUT				END STIFFENER						WEB WC ⚠1				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 191	1	—	—	—	1'-6⅝"	—	—	—	—	2	A242	.58	1'-11⅝"	—	—	—	—	—	—	4	A242	1	.98	2'-5½"

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ REVISE
☐ REJECTED
7/1/68 SK

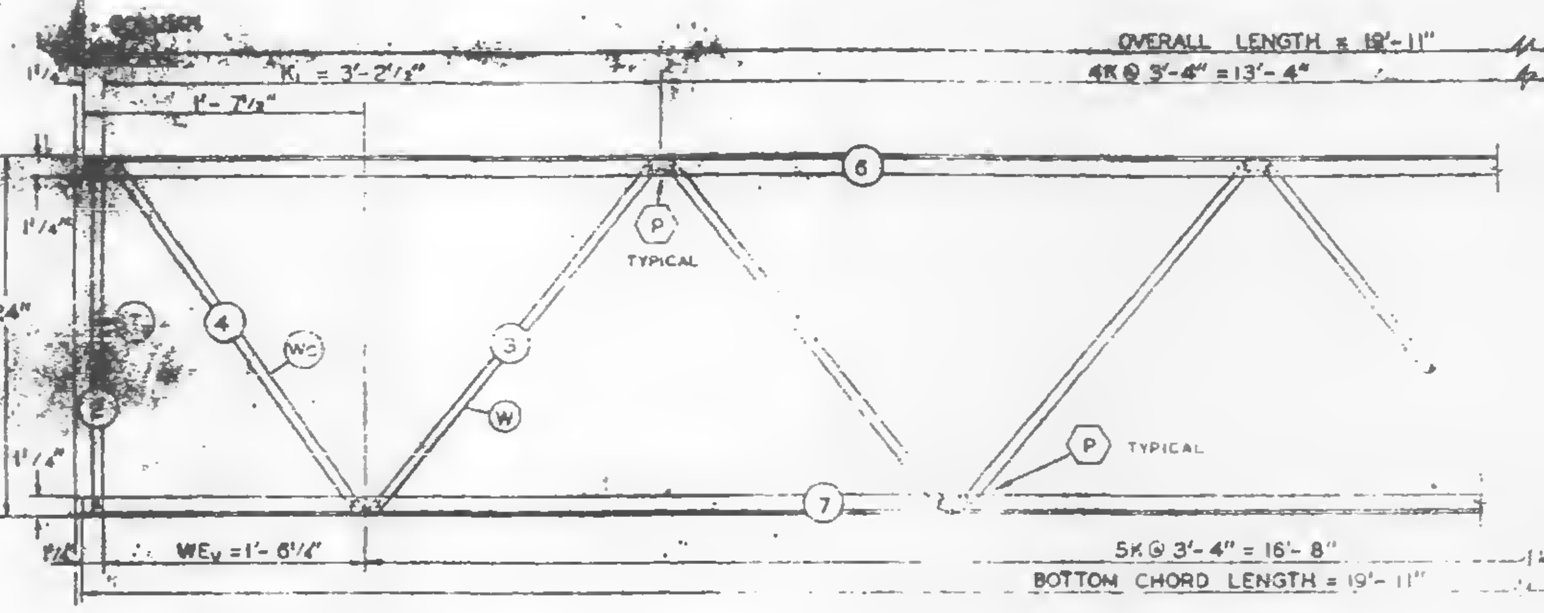
⚠1	6-26-68	REF. DRWG. WCV	T.M.C.
NO.	DATE	REVISION	BY

[illegible] NEW YORK [illegible]
[illegible] 6 [illegible]
[illegible] A-B
[illegible] COMPANY
Z-482-11
DRAWN BY [illegible]
DATE MAY 24, 1968
CHECKED BY T.M.C.
DATE MAY 24, 1968
LACLEDE STEEL CO.
6

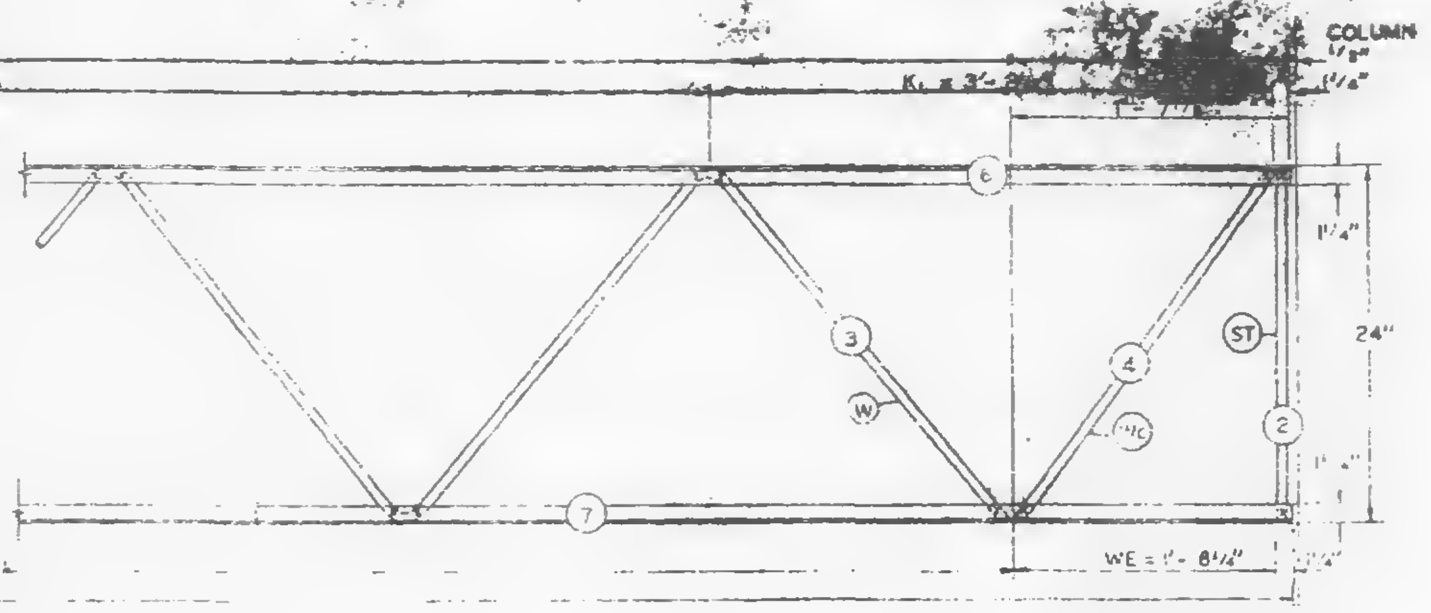
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2½"	± ¼"
WEB DEPTH	23⅞"	[illegible]
OVERALL LENGTH	19'-11"	[illegible]


OVERALL LENGTH = 19'-11"
4K @ 3'-4" = 13'-4"
K1 = 3'-2½"
1'-7½"
1¼"
24"
TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS.
R27 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
TYPICAL
5K @ 3'-4" = 16'-8"
BOTTOM CHORD LENGTH = 19'-11"
WEv
WE
½"
℄ COL.
℄ COL.
2
3
4
5
6
7

TRUSS ELEVATION



EL END ELEVATION



Es END ELEVATION

ALL PANEL POINTS RESISTANCE WELDED [illegible]. ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM [illegible] WEB SPLICES [illegible]. ALL WELD DETAILS SHOWN ON SHEET [illegible] AND [illegible]. LETTERS IN HEXAGONS INDICATE WELD DETAILS [illegible]. LETTERS AND NUMBERS IN SQUARES [illegible] SISTANCE WELD STRENGTH IDENTIFIED [illegible] QUALITY CONTROL PROGRAM. i.e. R24

REF. DWGS.
7-A82-1
7-A82-11
7-A83-11
7-A84-16 & 18
7-A84-20 & 41
7-A84-39

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T16 - 1911	6	A242	1¼"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.23"	19'-11"	3	A242	.98	30'-6½"	5K@ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5½"

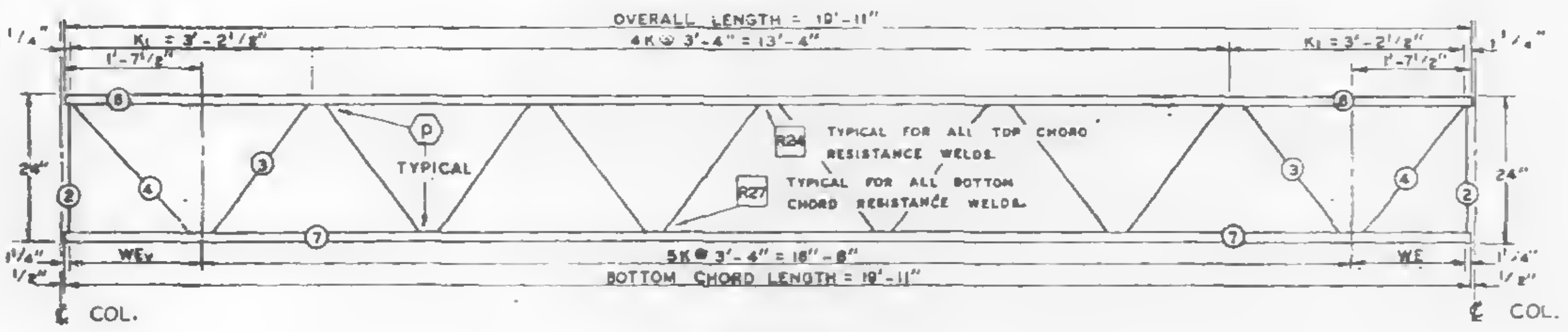
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER MK. V5			END STIFFENER MK. V6			WEB "WC"				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5½"

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

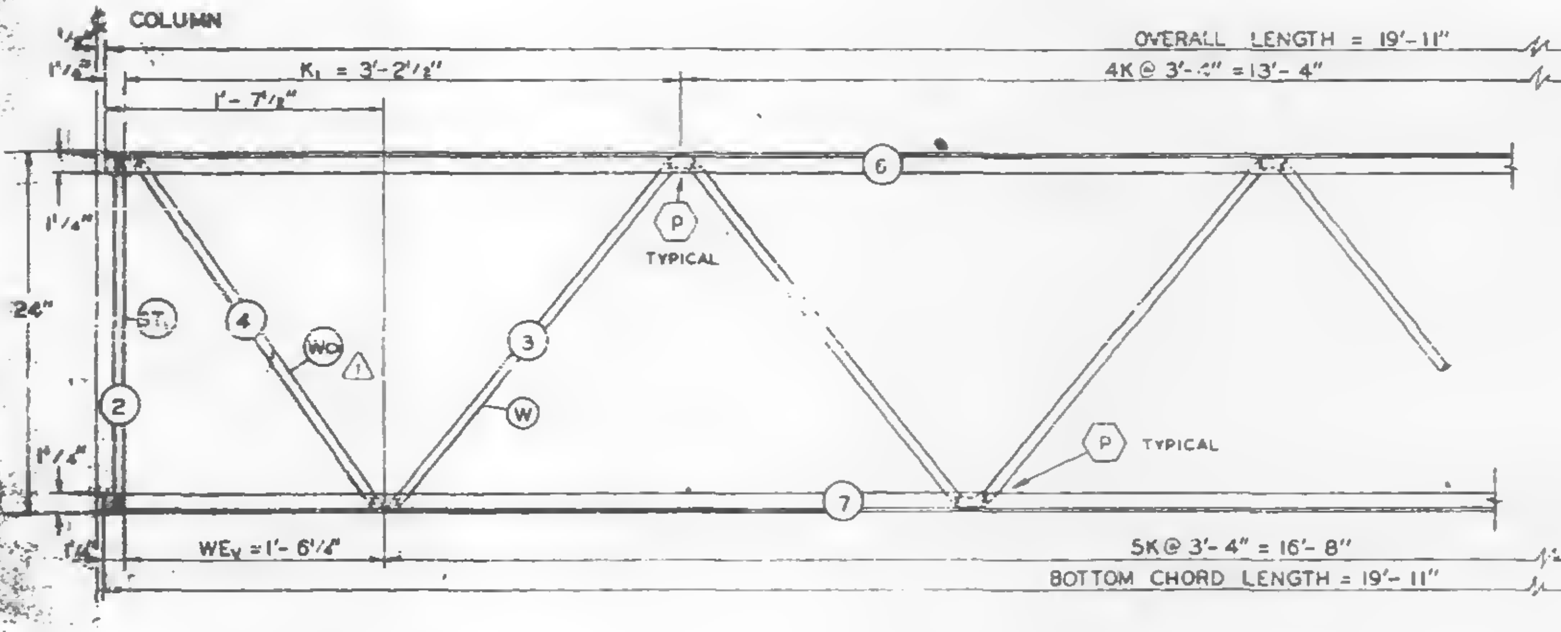
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-11
APPROVED FOR FABRICATION FOR P.O.N.Y.A. James White DATE 6/6/68
DRAWN BY ACW DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR LACLEDE STEEL CO. DATE
CHECKED BY T.M.CHUBA DATE MAY 24, 1968
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221



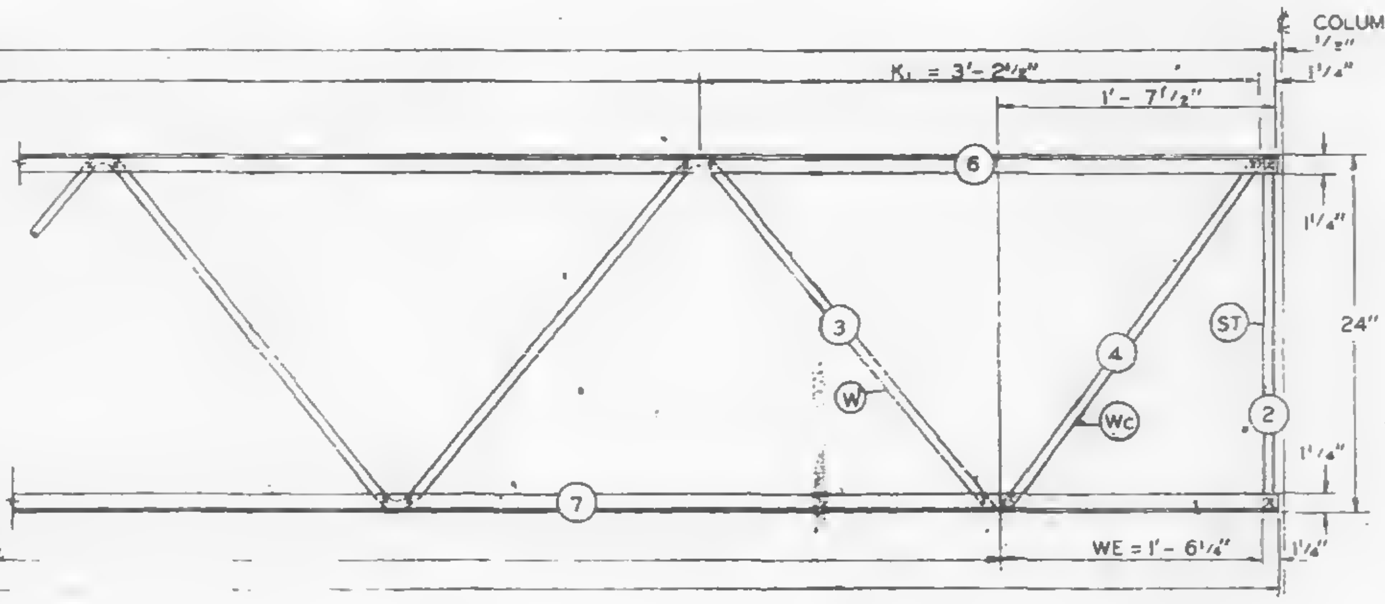
E_L END

TRUSS ELEVATION

E_S END



E_L END ELEVATION



E_S END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K_1"	3'-2½"	± 1/4"
WEB DEPTH	22⅞"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie. ⬡A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R24.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	6-10-68 ⚠2
7-AB4-16 & 18	5-6-68 ⚠1
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

PAINT
LACLEDE ELECTRICOAT
RED NO. 1000

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T16 - 1911	6	A242	1½"x1¼"x.275	19'-11"	7	A242	1½"x1¼"x.23	19'-11"	3	A242	.98	23'-7½" ⚠2	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

E_S	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	1'-8¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5½"

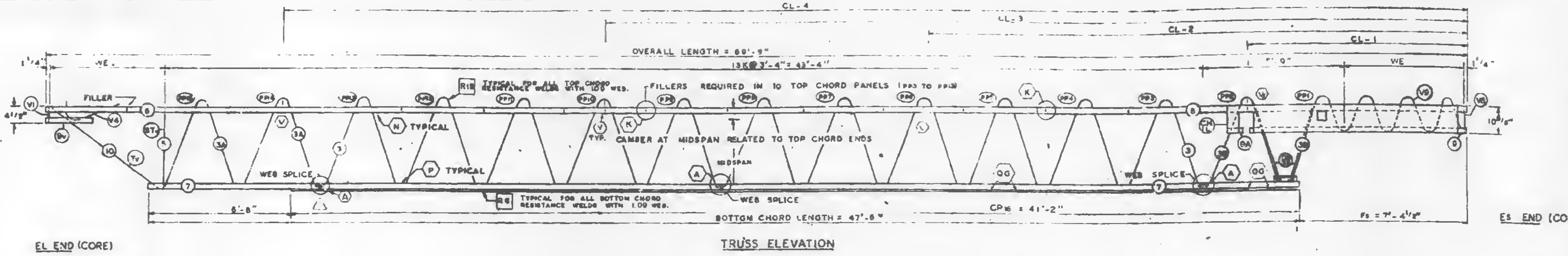
E_L END	TRUSS DESIGNATION	BEARING ANGLES				WE_V	DIAGONAL "T" STRUT				VERTICAL "ST_V" STRUT				END STIFFENER						WEB "Wc_V" ⚠1				
															MK. VS			MK. VS							
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	—	—	—	—	1'-5¼"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5½"

⚠2	7-3-68	MAIN WEB	T.M.C.
⚠1	6-25-68	REF. DRWG. WCV	T.M.C.
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-8

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE
DRAWN BY: gdc
DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA
DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO BT210


CL-4
CL-3
CL-2
CL-1
OVERALL LENGTH = 59'-9"
13K @ 3'-4" = 43'-4"
WE
1 1/4"
4 1/2"
FILLER
R18 TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS WITH 1.09 WEB.
FILLERS REQUIRED IN 10 TOP CHORD PANELS (PP3 TO PP13)
N TYPICAL
P TYPICAL
TYP. CAMBER AT MIDSPAN RELATED TO TOP CHORD ENDS
MIDSPAN
WEB SPLICE
R6 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS WITH 1.09 WEB.
6'-8"
BOTTOM CHORD LENGTH = 47'-8"
CP16 = 41'-2"
Fs = 7'-4 1/2"
10 5/8"
EL END (CORE)
ES END (COLUMN)

TRUSS ELEVATION

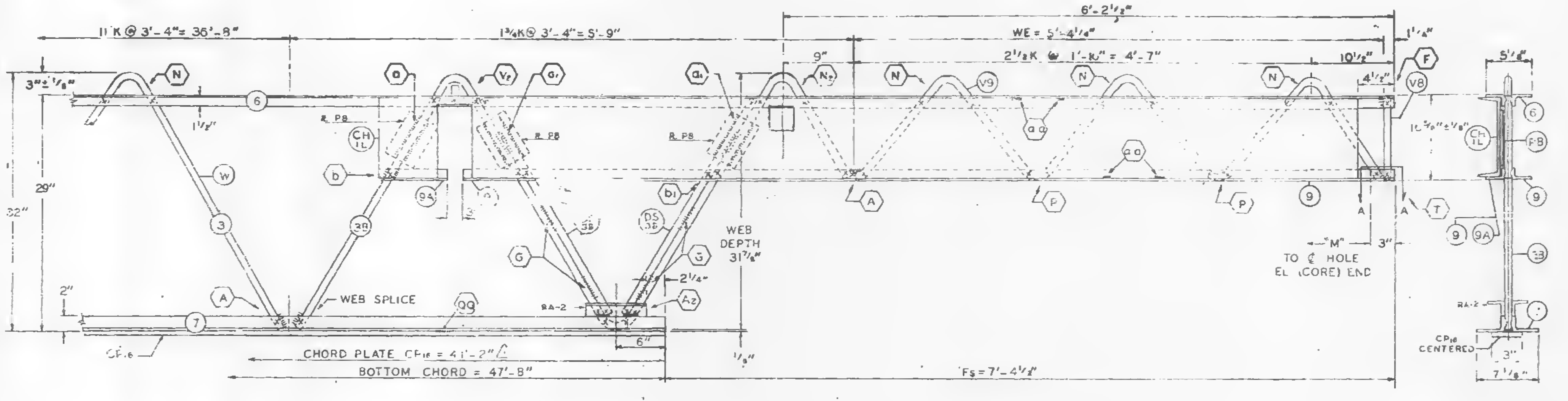
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2 1/16"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL K	3'-4"	± 1/4"
OVERALL LENGTH	59'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED. (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (▮▮▮).
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⬡A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R9.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST29..

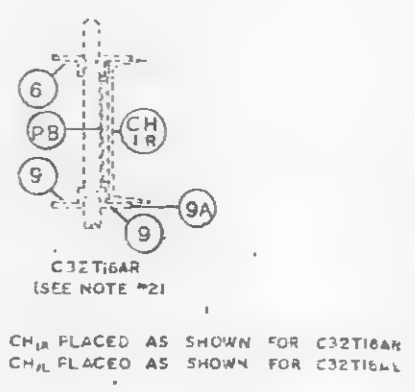
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.

NOTE 2

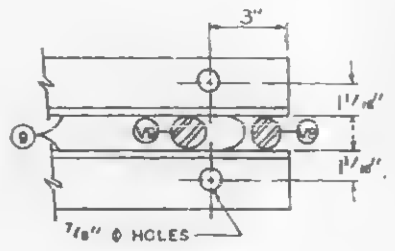
ALL DETAILS & ELEVATIONS SHOWN FOR C32T16AL TRUSSES ARE APPLICABLE TO C32T16AR TRUSSES WITH CHANNEL CH1R AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.



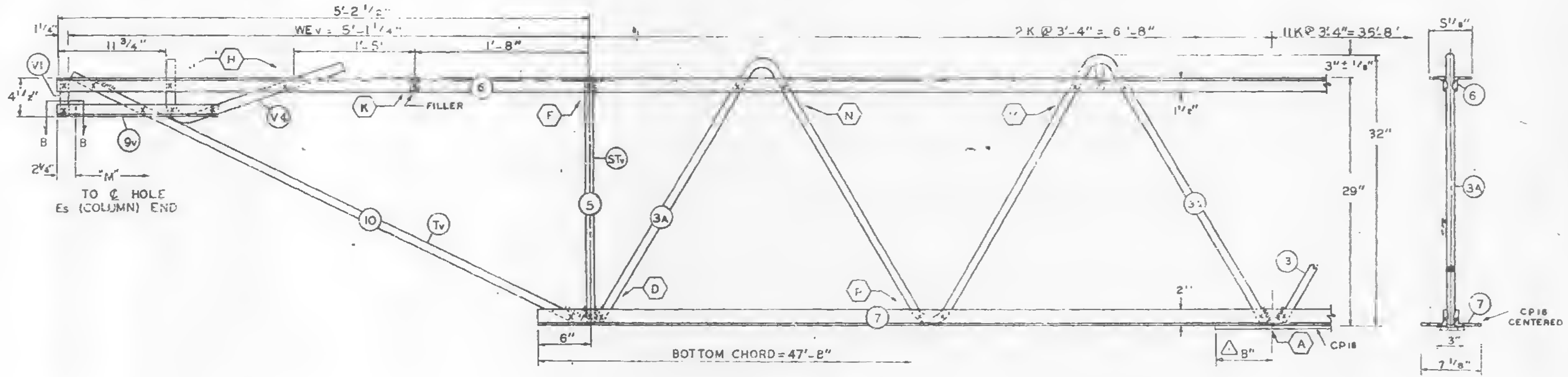
Es END (COLUMN)



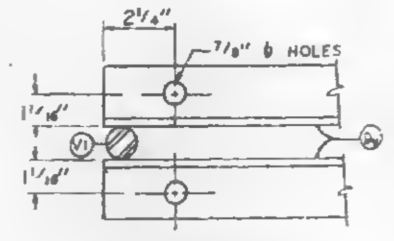
CH1R PLACED AS SHOWN FOR C32T16AR
CH1L PLACED AS SHOWN FOR C32T16AL



SECTION A-A



EL END (CORE)



SECTION B-B

NO.	DATE	REVISION	BY
△2	11-7-68	AS NOTED	G.D.C.
△1	10-31-68	CP16	LWH

△2 REF. DRWG.

7-AB1-15	10-4-68
7-AB1-54	10-4-68
7-AB1-53	7-22-68
7-AB3-2	1-3-68
7-AB3-24	8-15-68
7-AB4-17 & 17.2	10-4-56
SA-124	10-11-68
7-AB1-55	10-15-68

PAINT

LACLEDE ELECTROCOAT
RED NO. 10001

FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FLOOR TRUSS C32T16AL (SEE NOTE 2) x 59'-9" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB1-15	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 11/18/68	DRAWN BY: gdc DATE OCT. 8, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT 9 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. ST 216AL

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER		"M" C/C HOLES	CHORD PLATE △1				CONNECTION FILLERS			CHANNEL PLATES					REINFORCING ANGLES (2 REQ'D)				TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO	DIA	LENGTH	MK	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH		
C32T16AL-599	6	A242	2"x1 1/2"x.31	59'-9"	7	A36	3"x2"x.33"	47'-8"	3 3A 3B	A36 A242 A242	1.09 1.14 1.14	[illegible] 12'-5 1/2" 10'-7 5/8"	11 K @ 3'-4" = 36'-8" 2 K @ 3'-4" = 6'-8" 1 3/4K @ 3'-4" = 5'-9"	11	.109"	59'-3 3/4"	CP16	A36	3"x25	41'-2"	4	1.09	3"	P8	A36	3	4 1/2"x39	5 1/2"	RA-2	A36	3"x2"x.33"	7 1/2"		

COLUMN END

Es END	TRUSS DESIGNATION	BEARING ANGLES					WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER									CHANNEL			
																MK. V8			MK. V9			MK. V10						
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
	C32T16AL-599	9 9A	A242 A242	2"x1 1/2"x.25" 2"x1 1/2"x.25"	2 1	9'-5" 8 1/2"	5'-4 1/4	DS	A242	1.14	2'-6 3/4"	—	—	—	—	A242	1.14	10 1/2"	A242	1.14	8'-3 7/8"	—	—	—	CH1L CH1R	A36 A36	10⊏30 10⊏30	10'-0" 10'-0"

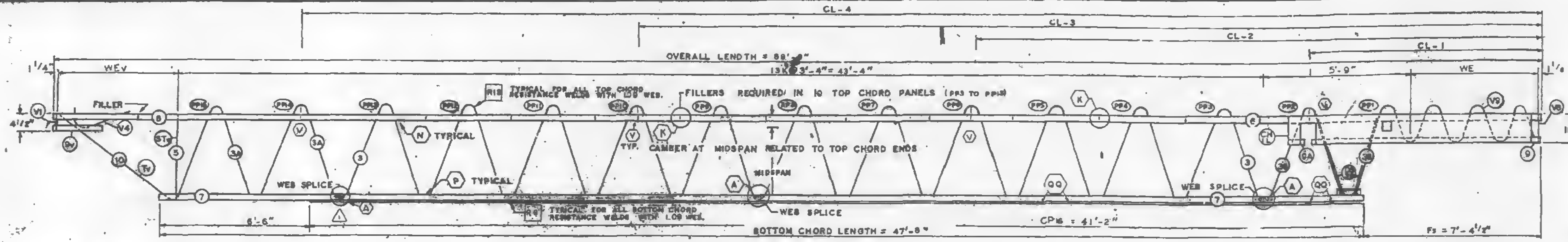
END

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				VERTICAL "STv" STRUT				END STIFFENER									DOUBLE STRUT				DOUBLE STRUT			
															MK. V1			MK. V2			MK. V4										
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	C32T16AL-599	9v	A242	2"x1 1/2"x.25	1'-7"	5'-1 1/4"	10	A242	1.14	5'-6 1/2"	5	A242	1.14	2'-4 7/8"	A242	1.14	4 3/8"	—	—	—	A242	1.14	2'-2 1/2"	-	—	—	—	—	—	—	—

△2

CHECK DIMENSION FOR TRUSS FAB.

LOCATION OF TRANS. TRUSS				
CL-1	CL-2	CL-3	CL-4	Fs
9'-6 1/2"	22'-10 1/2"	36'-2 1/2"	49'-6 1/2"	7'-4 1/2"


CL-4
CL-3
CL-2
CL-1
OVERALL LENGTH = 59'-9"
13K@3'-4" = 43'-4"
1 1/4"
WEv
5'-9"
WE
1 1/4"
FILLER
TYPICAL FOR ALL TOP CHORD RESISTANCE WELDS WITH 1.09 WEB.
FILLERS REQUIRED IN 10 TOP CHORD PANELS (PP3 TO PP12)
TYPICAL
TYP. CAMBER AT MIDSPAN RELATED TO TOP CHORD ENDS
MIDSPAN
WEB SPLICE
TYPICAL
TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS WITH 1.09 WEB.
WEB SPLICE
10 3/8"
6'-6"
BOTTOM CHORD LENGTH = 47'-8"
CP16 = 41'-2"
Fs = 7'-4 1/8"

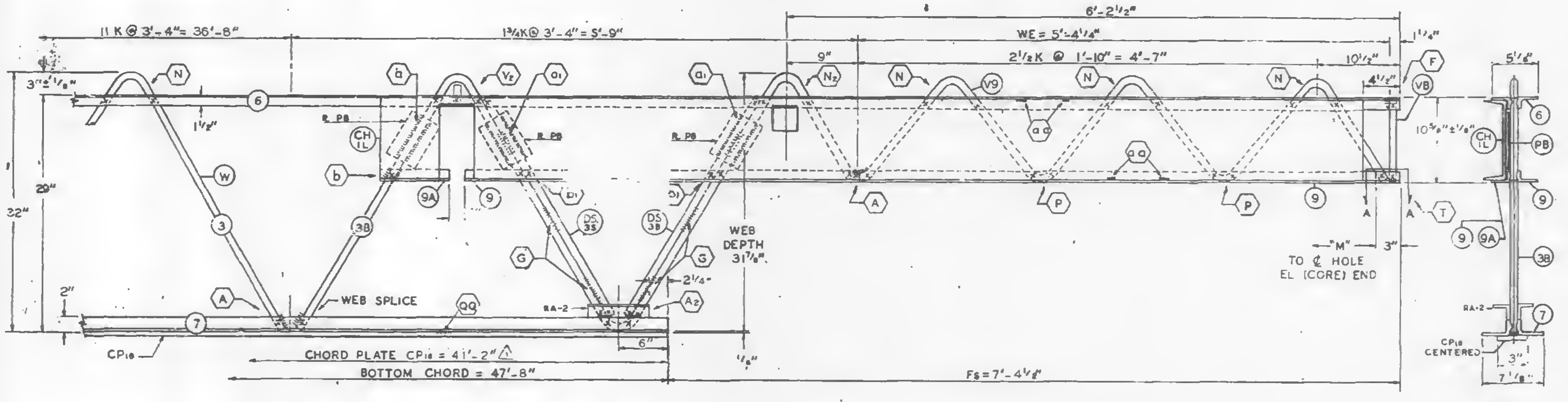
EL END (CORE)

TRUSS ELEVATION

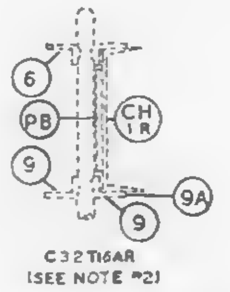
Es END (COLUMN)

FABRICATION REQUIREMENTS

	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2 1/16"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL K	3'-4"	± 1/4"
OVERALL LENGTH	59'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"



Es END (COLUMN)



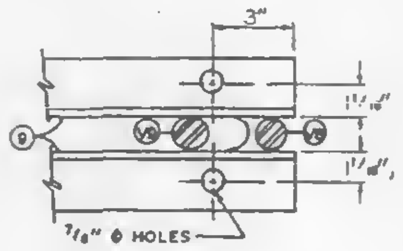
CH IR PLACED AS SHOWN FOR C32T16AR
CH IL PLACED AS SHOWN FOR C32T16AL

ALL PANEL POINTS RESISTANCE WELDED. (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R9.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291.

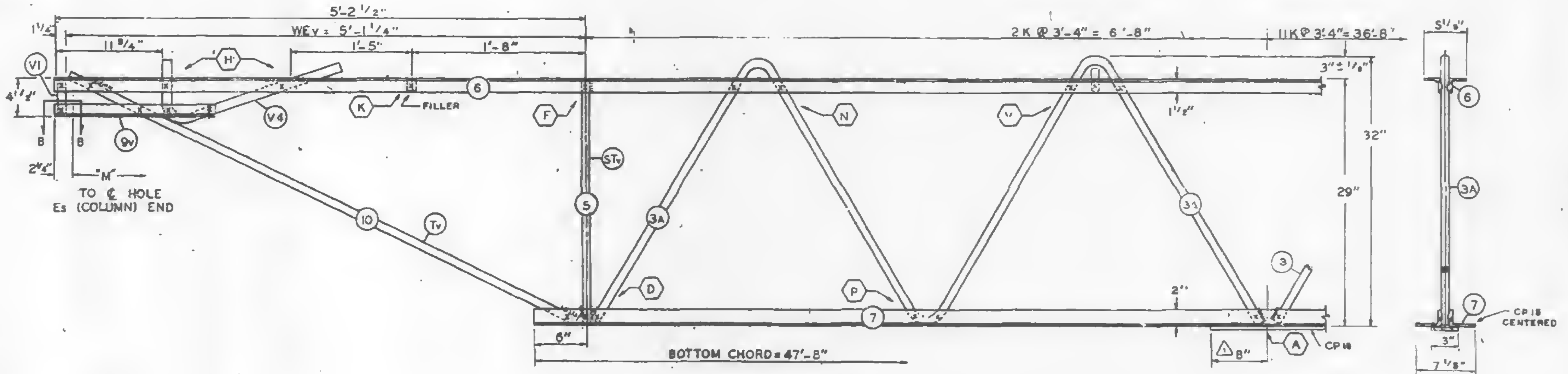
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.

NOTE 2

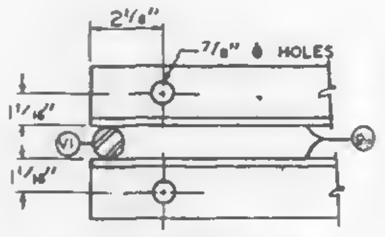
ALL DETAILS & ELEVATIONS SHOWN FOR C32T16AL TRUSSES ARE APPLICABLE TO C32T16AR TRUSSES WITH CHANNEL CHIR AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.



SECTION A-A



EL END (CORE)



SECTION B-B

NO.	DATE	REVISION	BY
1	10-31-68	CP16	LWH

REF. DRWG.
7-AB1-15 8-15-68
7-AB1-34 8-15-68
7-AB1-53 & 56 7-22-68
7-AB2-2 1-3-68
7-AB3-24 8-15-68
7-AB4-17 & 17.2 8-15-68
SA-124 8-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER		"M" C/C HOLES	CHORD PLATE 1				CONNECTION FILLERS			CHANNEL PLATES					REINFORCING ANGLES (2 REQ'D)				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO	DIA	LENGTH	MK	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH		
C32T16AL-599	6	A242	2"x1 1/2"x.31	59'-9"	7	A36	3"x2"x.33"	47'-8"	3 3A 3B	A36 A242 A242	1.09 1.14 1.14	[illegible] [illegible] [illegible]	11 K@3'-4" = 36'-8" 2 K@3'-4" = 6'-8" [illegible]	11	1.09"	59'-3 3/4"	CP 16	A36	3"x25	41'-2"	4	1.09	3"	PB	A36	3	4 1/2"x39	5 1/2"	RA-2	A36	3"x2"x.33"	7 1/2"		

COLUMN END

Es END	TRUSS DESIGNATION	BEARING ANGLES					WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER									CHANNEL			
																MK. V8			MK. V9			MK. V10						
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
	C32T16AL-599	9 9A	A242 A242	2"x1 1/2"x.25" 2"x1 1/2"x.25"	2 1	9'-5" 9 1/2"	5'-4 1/4"	DS	A242	1.14	2'-6 3/4"	—	—	—	—	A242	1.14	10 1/2"	A242	1.14	6'-3 7/8"	—	—	—	CH CH	A36 A36	10⊏30 10⊏30	10'-0" 10'-0"

CORE END

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				VERTICAL "STv" STRUT				END STIFFENER									DOUBLE STRUT				DOUBLE STRUT			
															MK. V1			MK. V2			MK. V4										
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	C32T16AL-599	9v	A242	2"x1 1/2"x.25	1'-7"	5'-1 1/4"	10	A242	1.14	5'-6 1/2"	5	A242	1.14	2'-4 3/4"	A242	1.14	4 3/8"	—	—	—	A242	1.14	2'-2 1/2"	—	—	—	—	—	—	—	—

CHECK DIMENSION FOR TRUSS FAB.

LOCATION OF TRANS. TRUSS				
CL-1	CL-2	CL-3	CL-4	Fs
9'-6 1/2"	22'-10 1/2"	36'-2 1/2"	49'-8 1/2"	7'-4 1/4"

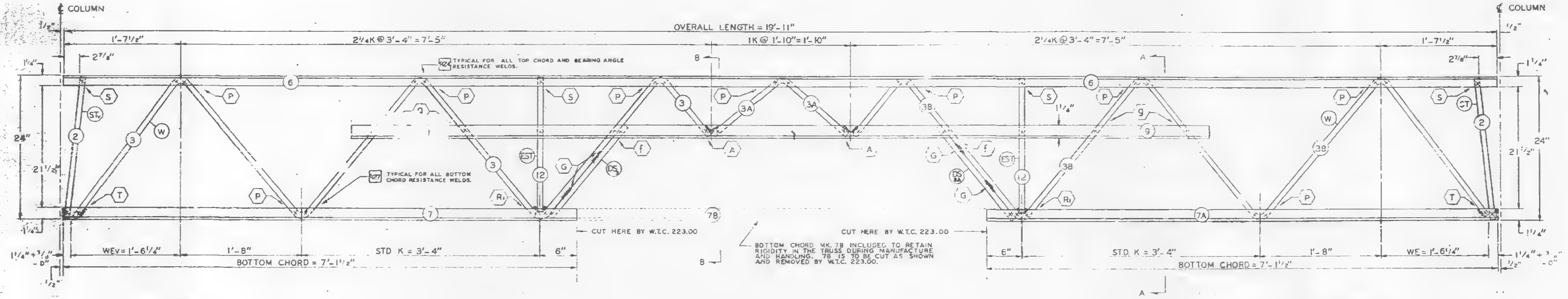
FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FLOOR TRUSS C32T16AL (SEE NOTE 2) x 59'-9" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB1-15	PLATE
APPROVED FOR FABRICATION BY: James W. FOR PONYA	DATE 11/7/68	DRAWN BY: gdc DATE OCT. 8, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 9, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. ST 216AL

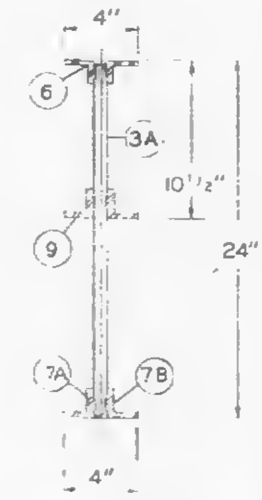
FABRICATION REQUIREMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL K	3'- 4"	± 1 / 4"
WEB DEPTH	23 7 / 8"	± 1 / 4"
OVERALL LENGTH	19'- 11"	± 3 / 8"



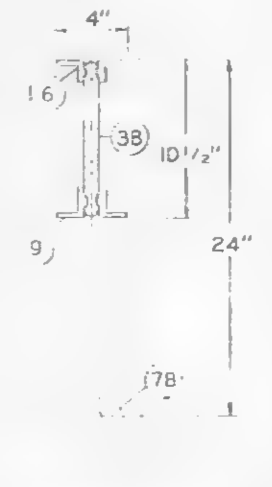
℄ COLUMN
OVERALL LENGTH = 19'- 11"
1'-7½"
2¼K @ 3'- 4" = 7'-5"
1K @ 1'-10" = 1'-10"
2¼K @ 3'- 4" = 7'-5"
1'-7½"
2⅞"
1¼"
½"
24"
21½"
R24 TYPICAL FOR ALL TOP CHORD AND BEARING ANGLE RESISTANCE WELDS.
R27 TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS.
6
S
STv
2
3
W
T
P
7
3A
3B
A
EST
12
G
f
g
9
DS3
DS3A
R1
7A
7B
CUT HERE BY W.T.C. 223.00
BOTTOM CHORD MK. 7B INCLUDED TO RETAIN RIGIDITY IN THE TRUSS DURING MANUFACTURE AND HANDLING. 7B IS TO BE CUT AS SHOWN AND REMOVED BY W.T.C. 223.00.
CUT HERE BY W.T.C. 223.00
WEv = 1'-6¼"
1'-8"
STD K = 3'-4"
6"
BOTTOM CHORD = 7'-1½"
6"
STD K = 3'- 4"
1'-8"
WE = 1'-6¼"
BOTTOM CHORD = 7'-1½"
1¼" + ⅜" - 0"
B
A
El END
Es END

TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELOEO (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (▨).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., Ⓐ.
ALL WELD DETAILS SHOWN ON SHEET ST290, ST291 & ST293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R27.



SECTION A-A



SECTION B-B

REF. DRWG.	
7-AB2-1	10-4-68
7-AB2-17	10-4-68
7-AB4-22	7
7-AB4-28	7-.
7-AB4-28.1	7-.
SA-124	10 "

PAINT
LACLEOE ELECTROCOAT
REO NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORO ONE ANGLE				MAIN WEB "W"					TRUSS DATA		DOUBLE STRUT				DOUBLE STRUT				VERTICAL "EST" STRUT					BEARING ANGLES			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
24T168 - 1911	6	A242	1½"x1¼"x.275"	19'-11"	7B	A242	1½"x1¼"x.23"	19'-11"	3 3A 3B	A242 A242 A242	.98 .98 .98	13'-10¾" 2'-4¾" 13'-10¾"	2¼K @ 3'-4" = 8'-11¼" 1K @ 1'-10" = 1'-10" 2¼K @ 3'-4" = 8'-11¼"			DS3	A242	.98	1'-6¾"	DS3A	A242	.98	1'-6¾"	12	A242	2	.98	1'-10⅞"	9	A242	1½"x1¼"x.275"	11'-10"

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	CHORD PLATE				BOTTOM CHORD ONE ANGLE			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T168 - 1911	2	A242	.98	1'-11¾"	1'-6¼"	–	——	——	——	7A	A242	1½"x1¼"x.23"	7'-1½"

Ev END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv	CHORD PLATE				BOTTOM CHORD ONE ANGLE			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T168 - 1911	2	A242	.98	1'-11¾"	1'-6¼"	–	——	——	——	7	A242	1½"x1¼"x.23"	7'-1½"

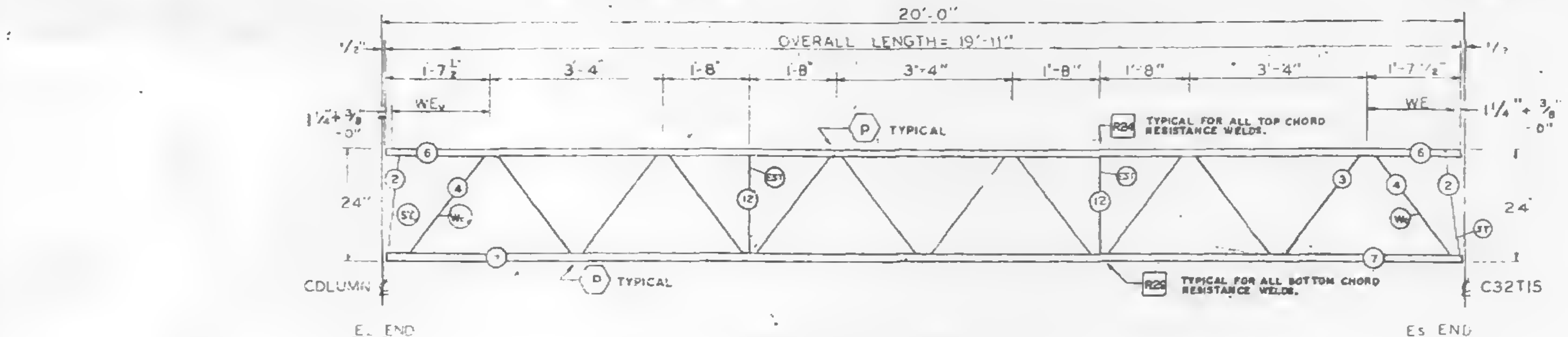
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T168 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A & B

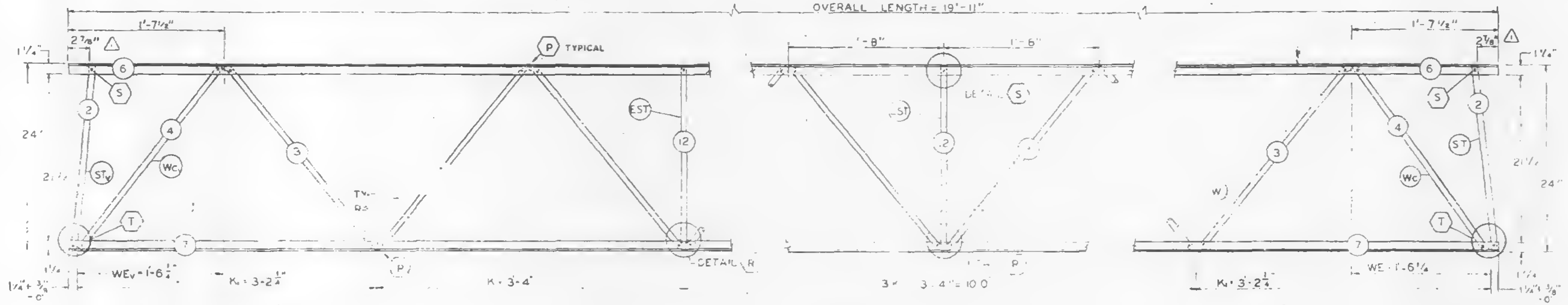
FABRICATION BY LACLEOE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-17	
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 11/7/68	DRAWN BY: gdc DATE SEPT. 26, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE SEPT. 26, 1968	IN CHARGE PROD. DEV
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET BT-216 B

LACLEDE STEEL CO.



TRUSS ELEVATION



FABRICATION REQUIRMENTS	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., ⟨A⟩.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

REF DWG	
7-AB2-1	10-4-68
7-AB2-17	10-4-68
7-AB4-15.1	10-4-68
7-AB4-16.18	7-22-68
7-AB4-28.41	7-22-68
7-AB4-38	10-4-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA
24T16C - 1911	6	A242	1 1/2" x 1 1/4" x .275"	19'-11"	7	A242	1 1/2" x 1 1/4" x .230"	19'-11"	3	A242	.98	25'-7 1/2"	5K @ 3'-4" = 16'-8"	12	A242	.98	1'-10 7/8"	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16C - 1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

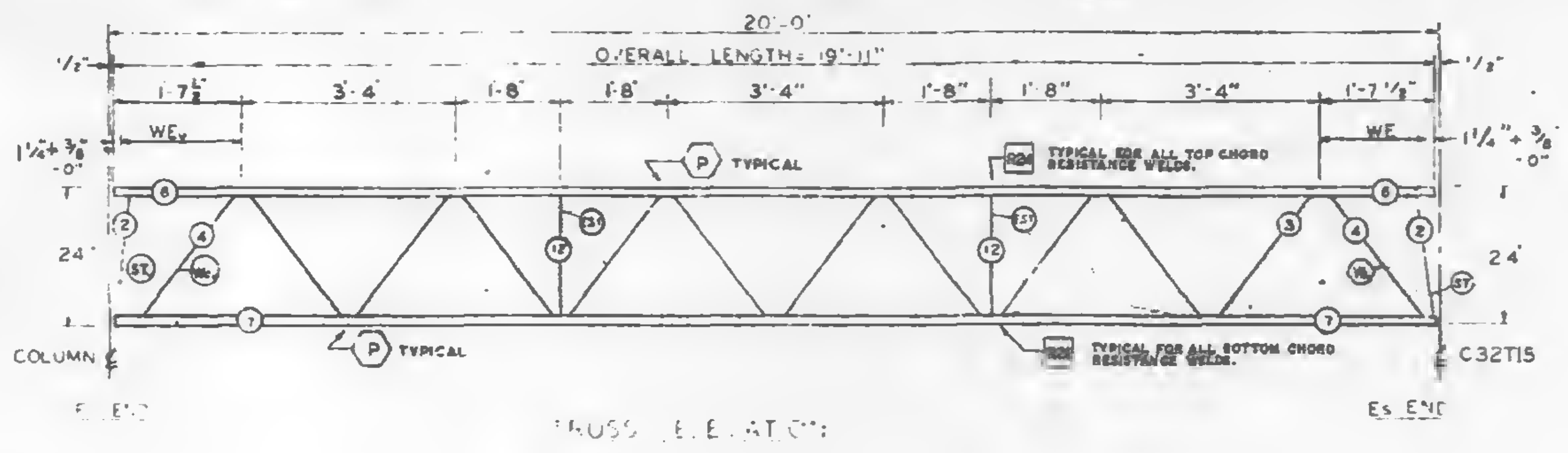
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				INCLINED "STv" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wcv"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16C - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/2"

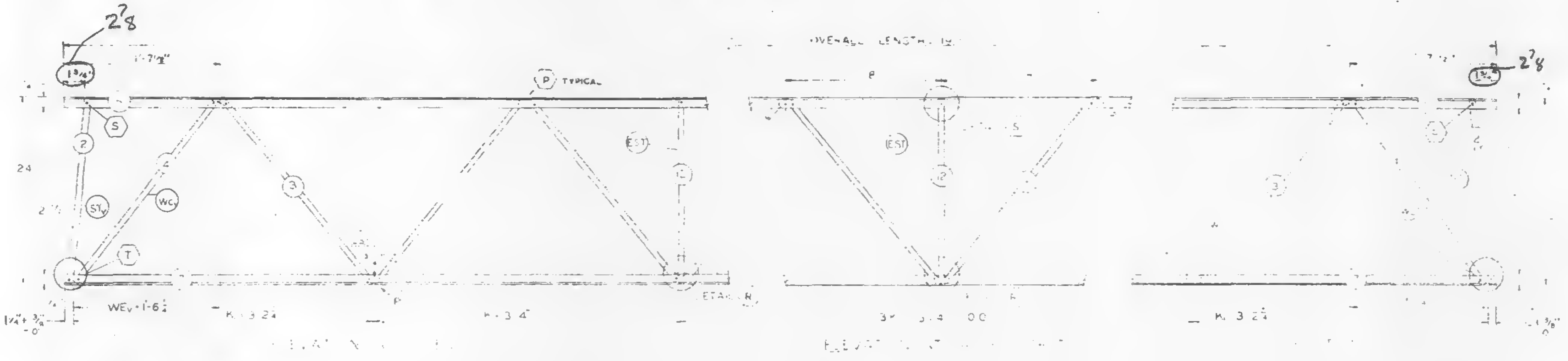
NO	DATE	REVISION	BY
1	11-18-68	AS NOTED	

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16C x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B 1

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-17 PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A DATE 11/18/68
DRAWN BY
DATE OCT. 28, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA
DATE OCT. 28, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO W T C 221
SHEET NO BT 216 C





FABRICATION REQUIRMENTS

	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	±1/8"
DESIGN DEPTH	24"	±1/4"
PANEL "K"	3'-4"	±1/4"
PANEL "K1"	3'-2 1/2"	±1/4"
WEB DEPTH	23 1/2"	±1/4"
OVERALL LENGTH	19'-11"	±1/8"

ALL PANEL POINTS RESISTANCE WELDED OR ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES.
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL i.e. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R23.

REF DWG.

7-AB2-1	10-4-68
7-AB2-17	10-4-68
7-AB4-15.1	10-4-68
7-AB4-16.18	7-22-68
7-AB4-28.41	7-22-68
7-AB4-38	10-4-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

SKILLING HELLE
CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
11/7/68 SK

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T16C - 1911	6	A242	1 1/2"x1 1/4"x.275"	19'-11"	7	A242	1 1/2"x1 1/4 x.230	19'-11"	3	A242	.98	25'-7 1/2"	5K @ 3'-4" =16'-8"	12	A242	.98	1'-10 7/8"	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
	24T16C-1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

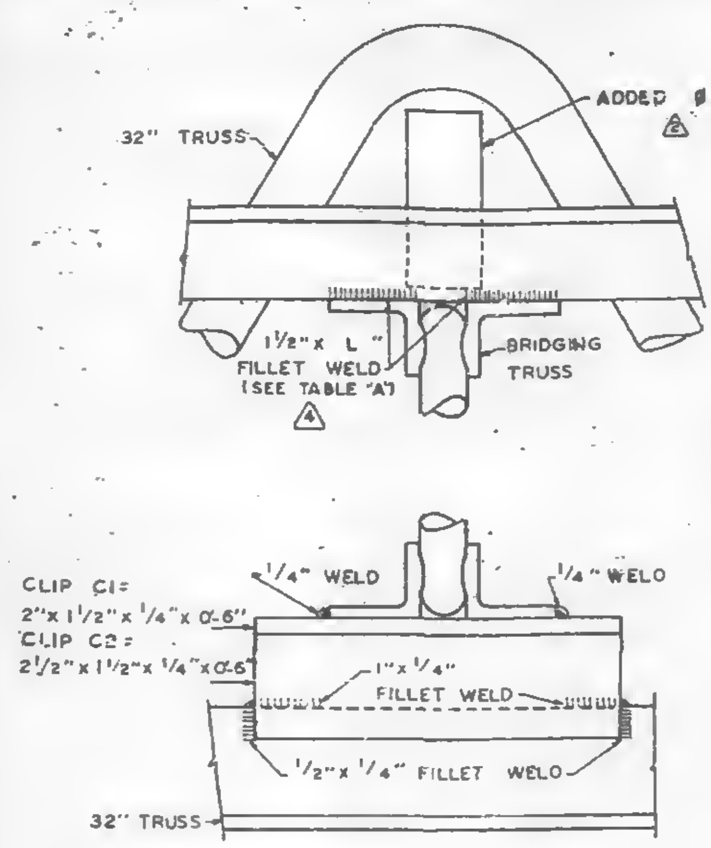
EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				INCLINED "STv" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "WCv"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16C - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/2"

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

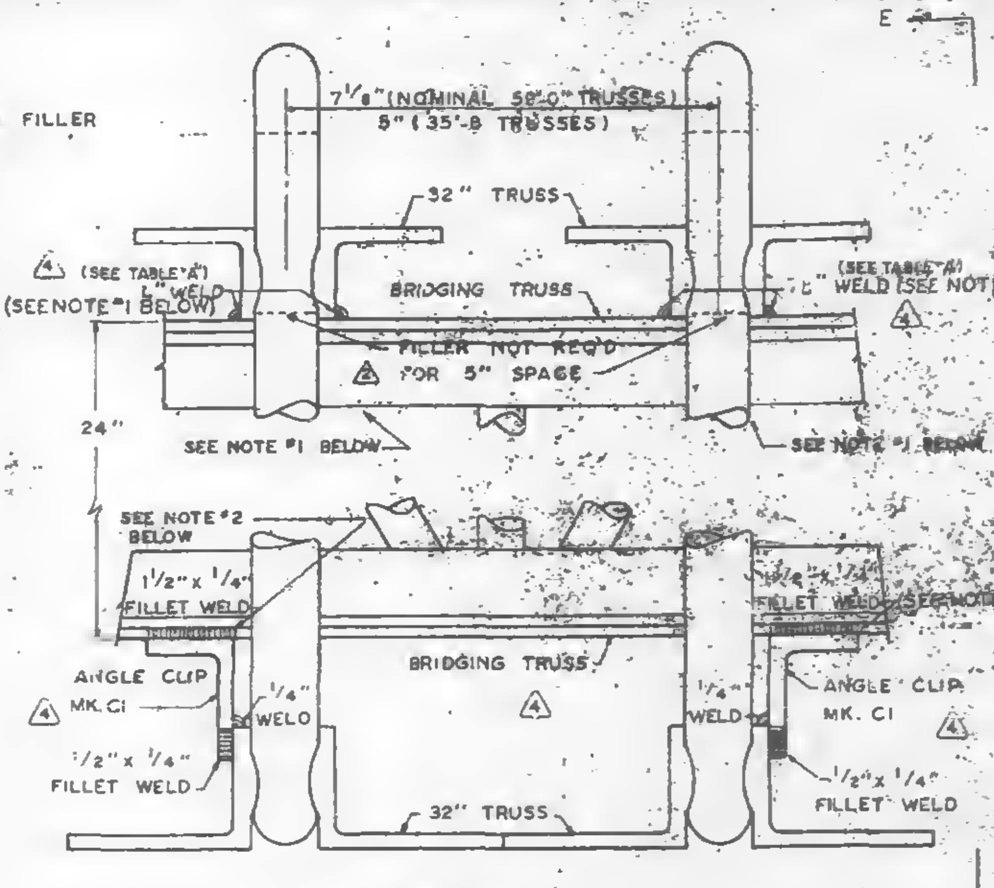
BRIDGING TRUSS 24T16C x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT. MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-17	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY: L.R. DATE OCT. 28, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CIRIRA DATE OCT. 28, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER	LACLEDE STEEL CO.	FABRICATION CONT. NO. W T C 221	SHEET NO BT 216 C



SECTION E-E



5-C

INTERIOR

BRIDGING TRUSS CONNECTION

(CENTER OF PANEL)

(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 6-C IN F & FR PANELS.)

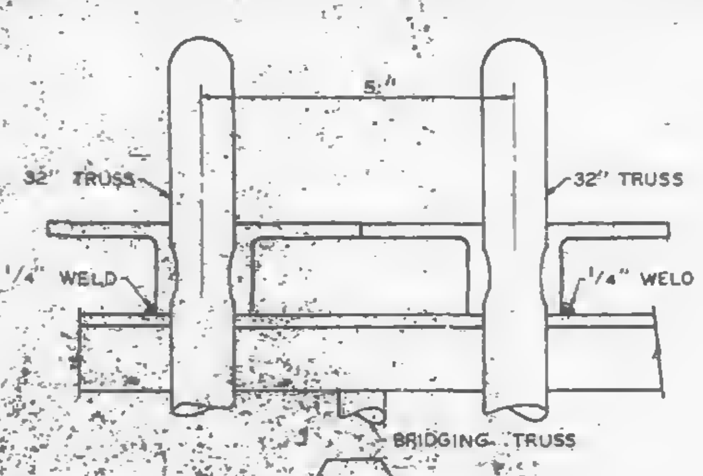
NOTES:

#1 24T10 THRU 24T10L DO NOT HAVE A TOP CHORD PLATE.

#2 24T14, T14B, T15, T15A & T16 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

TABLE "A"

"L"	LOCATION
¼"	PANELS: D1, DR1, E1, ER1, F1, FR1, G1, GR1, D5, DR5, E5, ER5, F5 & FR5
5/16"	PANELS: D3, DR3, D8, E3, ER3, E8, F8, FR8, F3 & FR3
3/8"	PANEL: DR8 & ER8

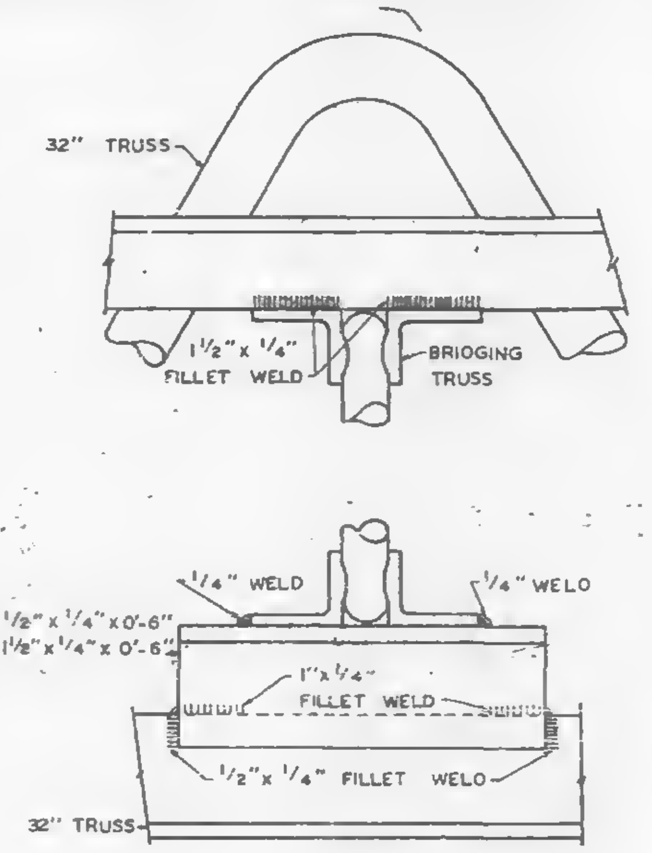


4-CB

INTERIOR BRIDGING TRUSS CONNECTION

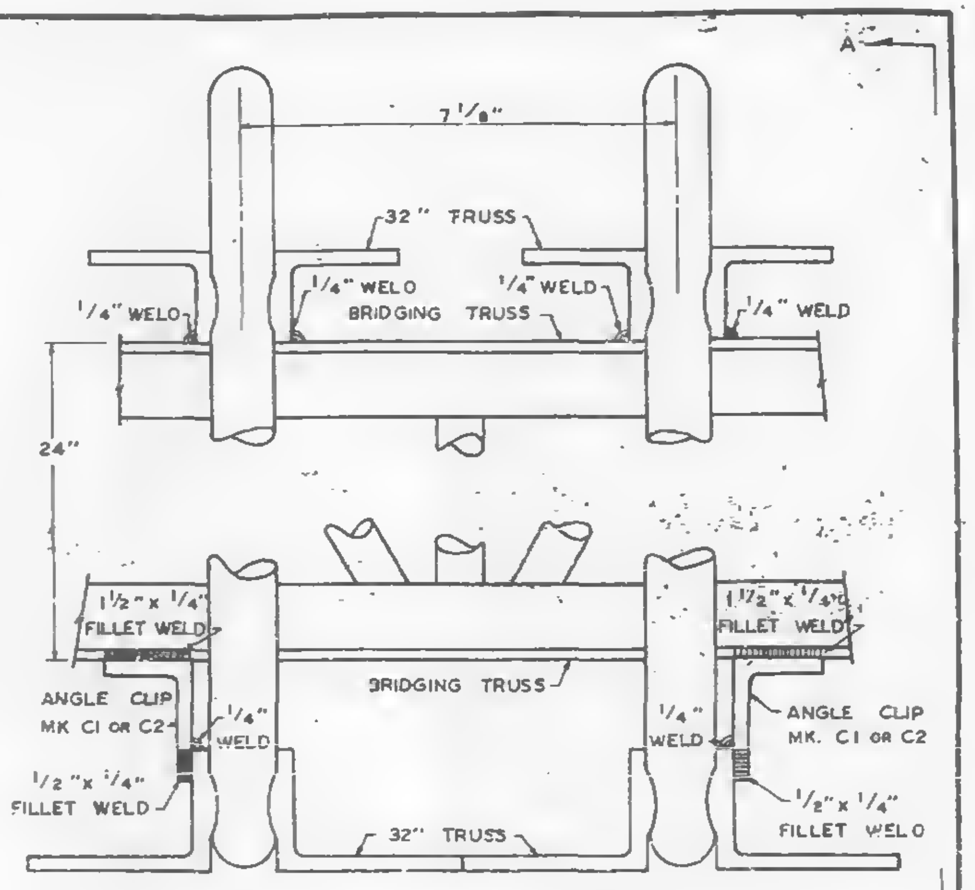
(CENTER OF PANEL 5" ℄ TO ℄)

(PANELS H, HR, J, K, KR, M AND MR)



C1 = 2" x 1½" x ¼" x 0'-6"
C2 = 2½" x 1½" x ¼" x 0'-6"

SECTION A-A



4-CA

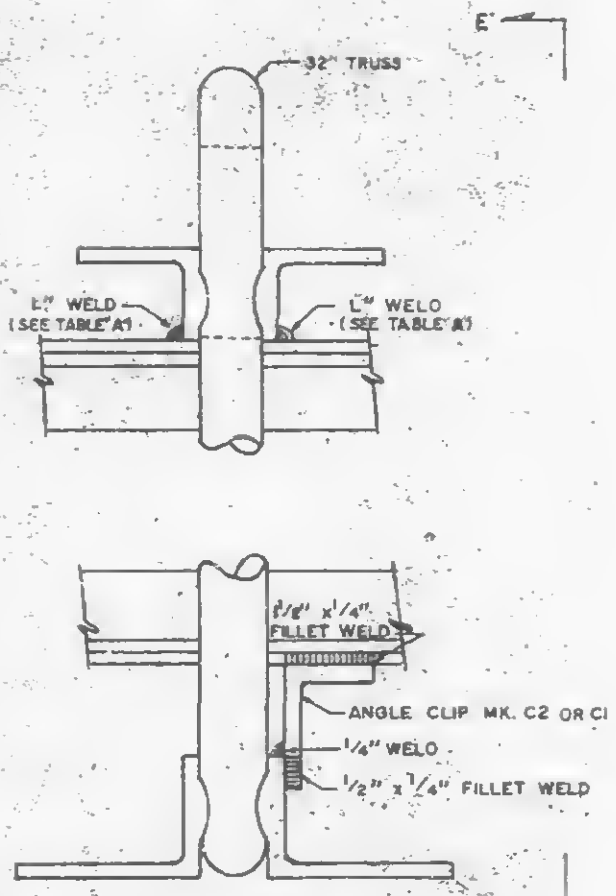
INTERIOR

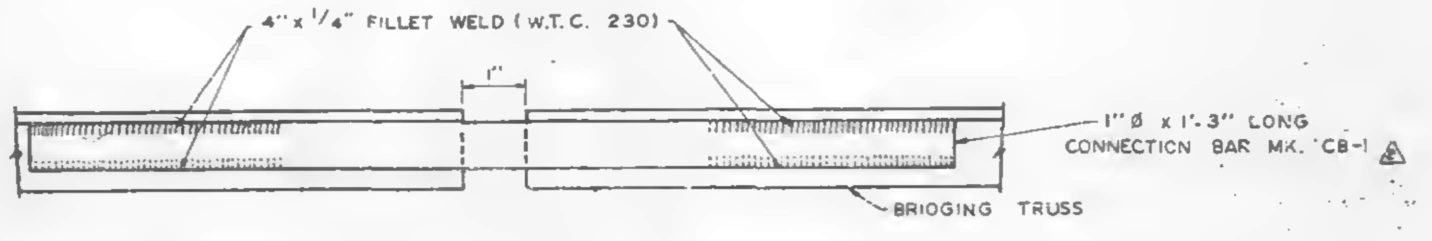
BRIDGING TRUSS CONNECTION

(CENTER OF PANEL)

(7⅛" ℄ TO ℄)

(PANEL A, B, BR, C, CR, D, DR, E, ER, F & FR.




4" x ¼" FILLET WELD (W.T.C. 230)
1"
1" ⌀ x 1'-3" LONG CONNECTION BAR MK. "CB-1"
BRIDGING TRUSS

SECTION X-X

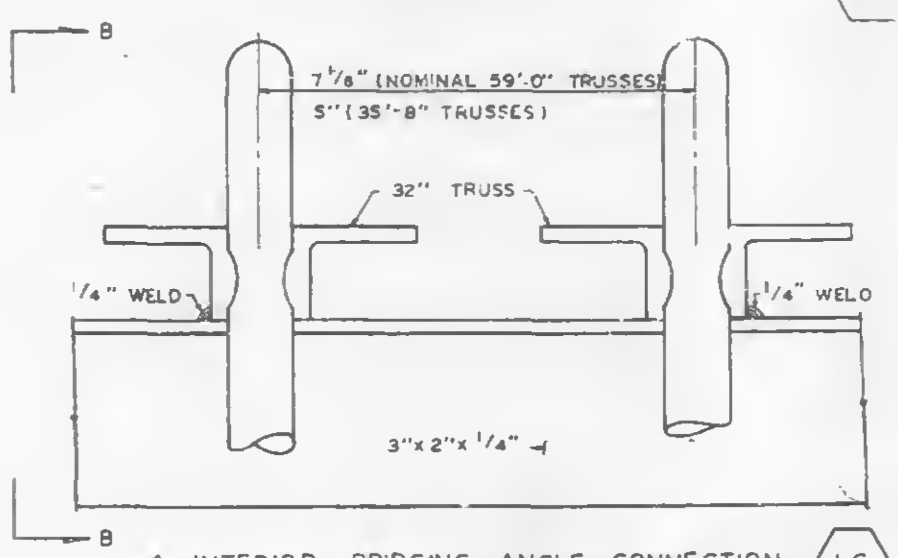
6-C

INTERIOR

BRIDGING TRUSS CONNECTION

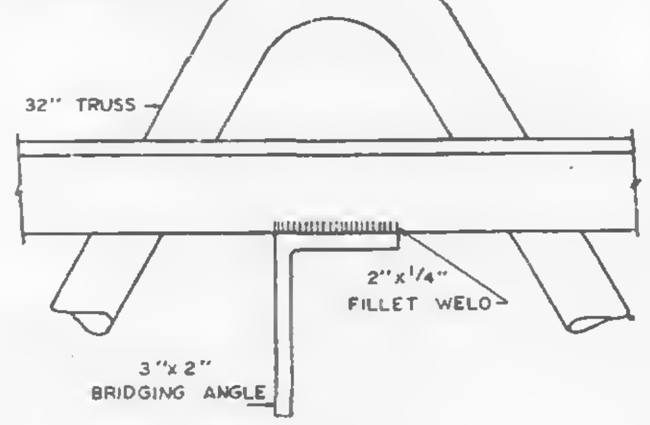
(24T CONNECTING TO 32" TRUSS)

NOTE: 24T14 & T14B DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

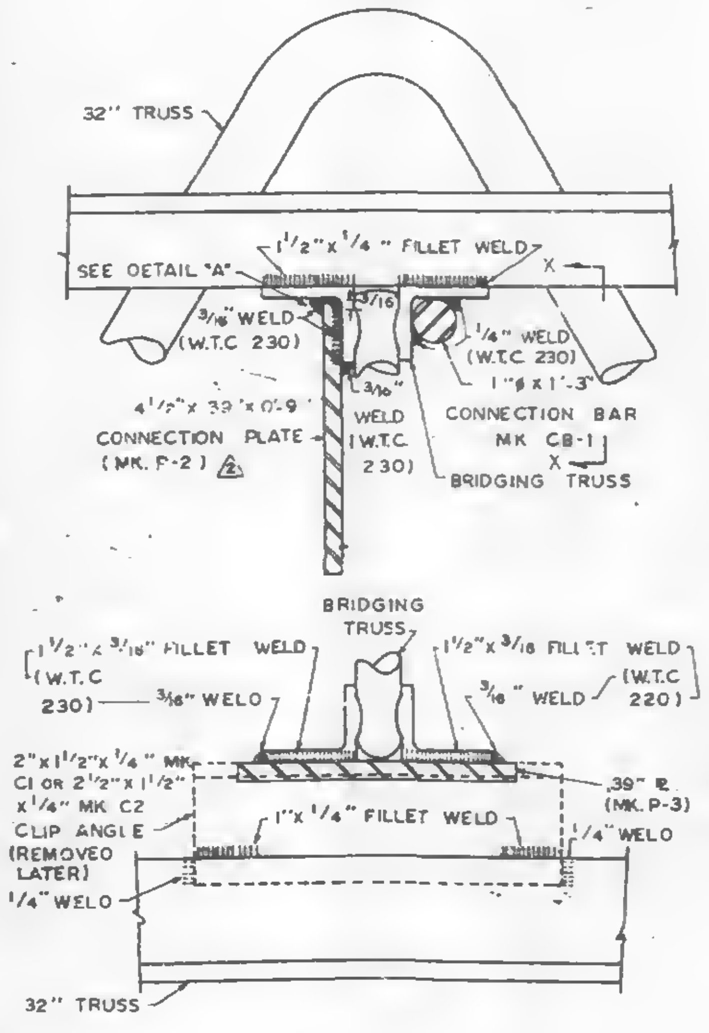


INTERIOR BRIDGING ANGLE CONNECTION 1-C

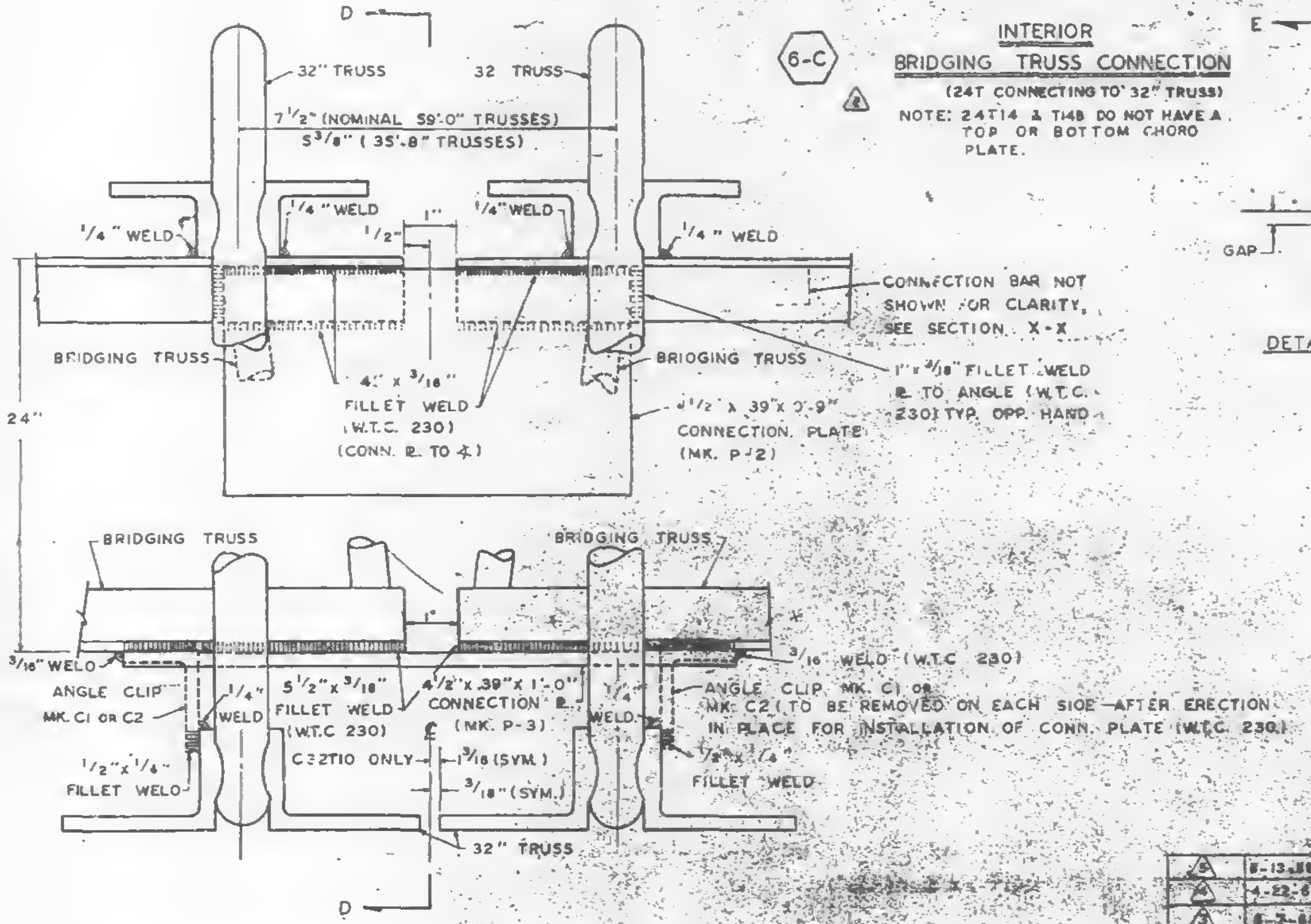
(CENTER OF PANEL)



SECTION B-B

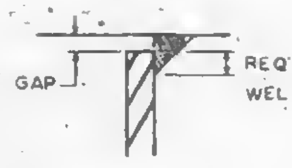


SECTION D-D

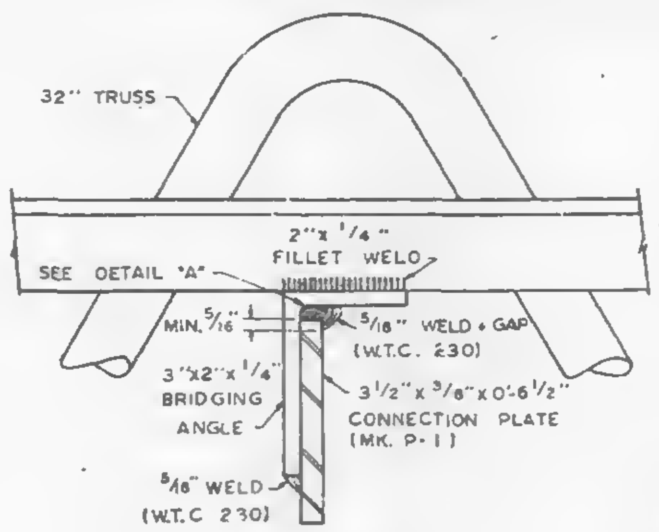

D
32" TRUSS
32 TRUSS
7½" (NOMINAL 59'-0" TRUSSES)
5⅜" (35'-8" TRUSSES)
¼" WELD
¼" WELD
¼" WELD
¼" WELD
½"
1"
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
BRIDGING TRUSS
BRIDGING TRUSS
4" x 3/16" FILLET WELD (W.T.C. 230) (CONN. ℞ TO ∡)
1" x 3/16" FILLET WELD ℞ TO ANGLE (W.T.C. 230) TYP. OPP. HAND
4½" x 39" x 0'-9" CONNECTION PLATE (MK. P-2)
24"
BRIDGING TRUSS
BRIDGING TRUSS
1"
3/16" WELD
3/16" WELD (W.T.C 230)
ANGLE CLIP MK. C1 OR C2
¼" WELD
5½" x 3/16" FILLET WELD (W.T.C 230)
4½" x .39" x 1'-0" CONNECTION ℞ (MK. P-3)
¼" WELD
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230)
½" x ¼" FILLET WELD
½" x ¼" FILLET WELD
C32T10 ONLY
℄
1 3/16 (SYM.)
3/16" (SYM.)
32" TRUSS
D

7-C PANEL JOINT BRIDGING TRUSS CONNECTION

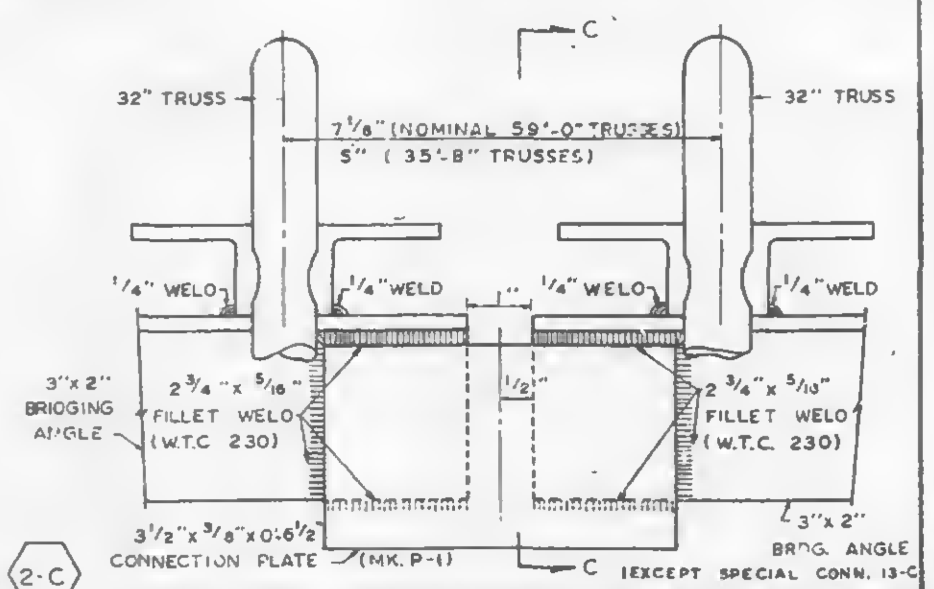
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 16C & (7C)



DETAIL "A"


32" TRUSS
2" x ¼" FILLET WELD
SEE DETAIL "A"
MIN. 5/16"
5/16" WELD + GAP (W.T.C. 230)
3" x 2" x ¼" BRIDGING ANGLE
3½" x ⅜" x 0'-6½" CONNECTION PLATE (MK. P-1)
5/16" WELD (W.T.C 230)

SECTION C-C


C
32" TRUSS
32" TRUSS
7⅛" (NOMINAL 59'-0" TRUSSES)
5" (35'-8" TRUSSES)
¼" WELD
¼" WELD
¼" WELD
¼" WELD
1"
½"
3" x 2" BRIDGING ANGLE
2¾" x 5/16" FILLET WELD (W.T.C 230)
2¾" x 5/16" FILLET WELD (W.T.C. 230)
3½" x ⅜" x 0'-6½" CONNECTION PLATE (MK. P-1)
C
3" x 2" BRDG. ANGLE

2-C PANEL JOINT BRIDGING ANGLE CONNECTION (EXCEPT SPECIAL CONN. 13-C 14-C & 15-C)

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
4. ALL PLATES & ⌀ SPLICE BARS TO BE ASTM A36.
5. SEE SHEET CO-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

7-AB4-15	7-22-68
7-AB4-16	7-22-68

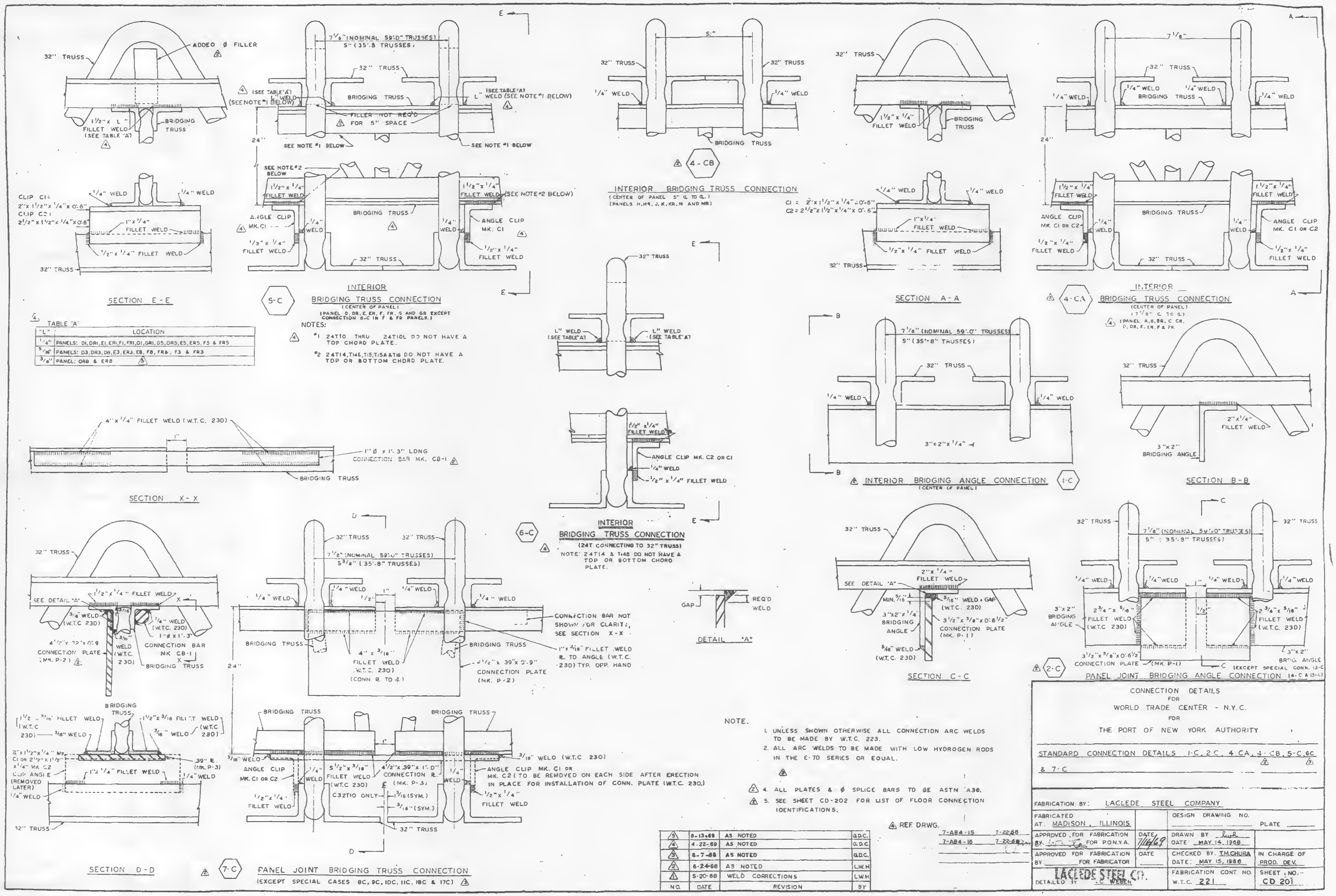
NO.	DATE	REVISION	BY
5	5-13-69	AS NOTED	G.D.C.
4	4-22-69	AS NOTED	G.D.C.
3	6-7-68	AS NOTED	G.D.C.
2	5-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C, 6C
& 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 7/28/69	DRAWN BY: DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 201


32" TRUSS
ADDED ⌀ FILLER
1½" x "L" FILLET WELD (SEE TABLE 'A')
BRIDGING TRUSS
CLIP C1: 2" x 1½" x ¼" x 0'-6"
CLIP C2: 2½" x 1½" x ¼" x 0'-6"
¼" WELD
1" x ¼" FILLET WELD
½" x ¼" FILLET WELD
7⅛" (NOMINAL 59'-0" TRUSSES)
5" (35'-8" TRUSSES)
"L" WELD (SEE TABLE 'A') (SEE NOTE #1 BELOW)
FILLER NOT REQ'D FOR 5" SPACE
SEE NOTE #1 BELOW
SEE NOTE #2 BELOW
1½" x ¼" FILLET WELD
ANGLE CLIP MK. C1
ANGLE CLIP MK. C1 OR C2
24"
4" x ¼" FILLET WELD (W.T.C. 230)
1" ⌀ x 1'-3" LONG CONNECTION BAR MK. CB-1
C1 = 2" x 1½" x ¼" x 0'-6"
C2 = 2½" x 1½" x ¼" x 0'-6"
ANGLE CLIP MK. C2 OR C1
3" x 2" x ¼"
2" x ¼" FILLET WELD
3" x 2" BRIDGING ANGLE
SEE DETAIL "A"
5/16" WELD + GAP (W.T.C. 230)
3½" x ⅜" x 0'-6½" CONNECTION PLATE (MK. P-1)
GAP
REQ'D WELD
2¾" x 5/16" FILLET WELD (W.T.C. 230)
3" x 2" BRDG. ANGLE
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
4" x 3/16" FILLET WELD (W.T.C. 230) (CONN. ℞. TO ⌀)
4'-1" x 39" x 0'-9" CONNECTION PLATE (MK. P-2)
1" x 3/16" FILLET WELD ℞. TO ANGLE (W.T.C. 230) TYP. OPP. HAND
5½" x 3/16" FILLET WELD (W.T.C. 230)
4½" x 39" x 1'-0" CONNECTION ℞. (MK. P-3)
C32T10 ONLY
3/16 (SYM.)
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230.)
2" x 1½" x ¼" MK. C1 OR 2½" x 1½" x ¼" MK. C2 CLIP ANGLE (REMOVED LATER)
A
B
C
D
E
X

SECTION E-E

⑤-C INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 6-C IN F & FR PANELS.)

NOTES:

④ #1 24T10 THRU 24T10L DO NOT HAVE A TOP CHORD PLATE.

#2 24T14, T14S, T15, T15A & T16 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

④-CB INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" ℄ TO ℄)
(PANELS H, HR, J, K, KR, N AND NR)

SECTION A-A

④-CA INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7⅛" ℄ TO ℄)
(PANEL A, B, BR, C, CR, D, DR, E, ER, F & FR.)

④ TABLE 'A'

"L"	LOCATION
¼"	PANELS: D1, DR1, E1, ER1, F1, FR1, G1, GR1, D5, DR5, E5, ER5, F5 & FR5
5/16"	PANELS: D3, DR3, D8, E3, ER3, E8, F8, FR8, F3 & FR3
⅜"	PANEL: DR8 & ER8 ⑤

SECTION X-X

⑥-C INTERIOR BRIDGING TRUSS CONNECTION
(24T CONNECTING TO 32" TRUSS)
NOTE: 24T14 & T14S DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

③ INTERIOR BRIDGING ANGLE CONNECTION (CENTER OF PANEL) ①-C

SECTION B-B

DETAIL "A"

SECTION C-C

② ②-C PANEL JOINT BRIDGING ANGLE CONNECTION (EXCEPT SPECIAL CONN. 13-C, 14-C & 15-C)

SECTION D-D

⑦-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 18C & 17C) ⑤

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

②

② 4. ALL PLATES & ⌀ SPLICE BARS TO BE ASTM A36.

② 5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

④ REF. DRWG.

7-AB4-15 7-22-68
7-AB4-16 7-22-68

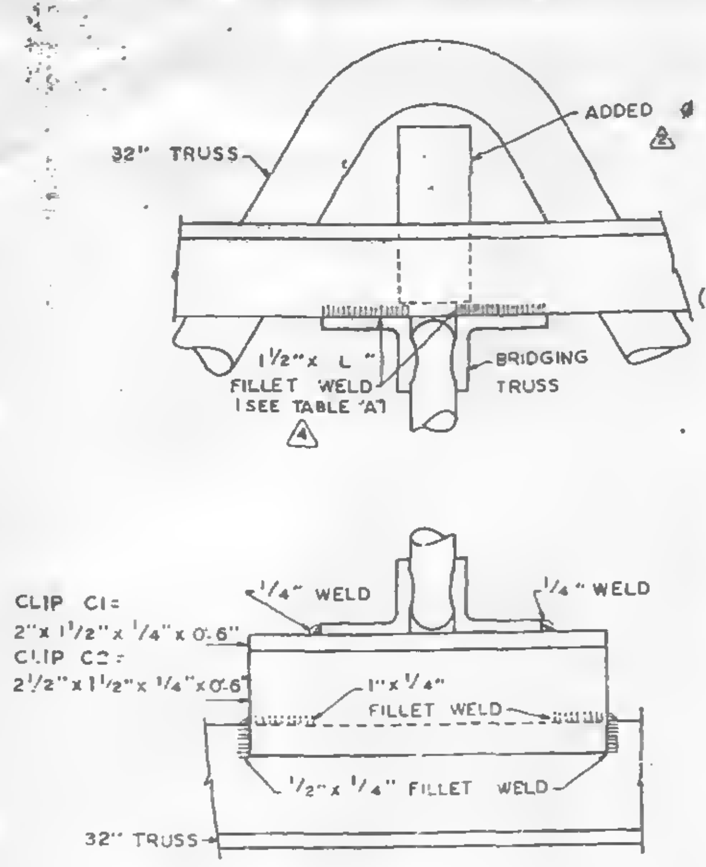
NO.	DATE	REVISION	BY
⑤	8-13-69	AS NOTED	G.D.C.
④	4-22-69	AS NOTED	G.D.C.
③	8-7-68	AS NOTED	G.D.C.
②	6-24-68	AS NOTED	L.W.H.
①	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

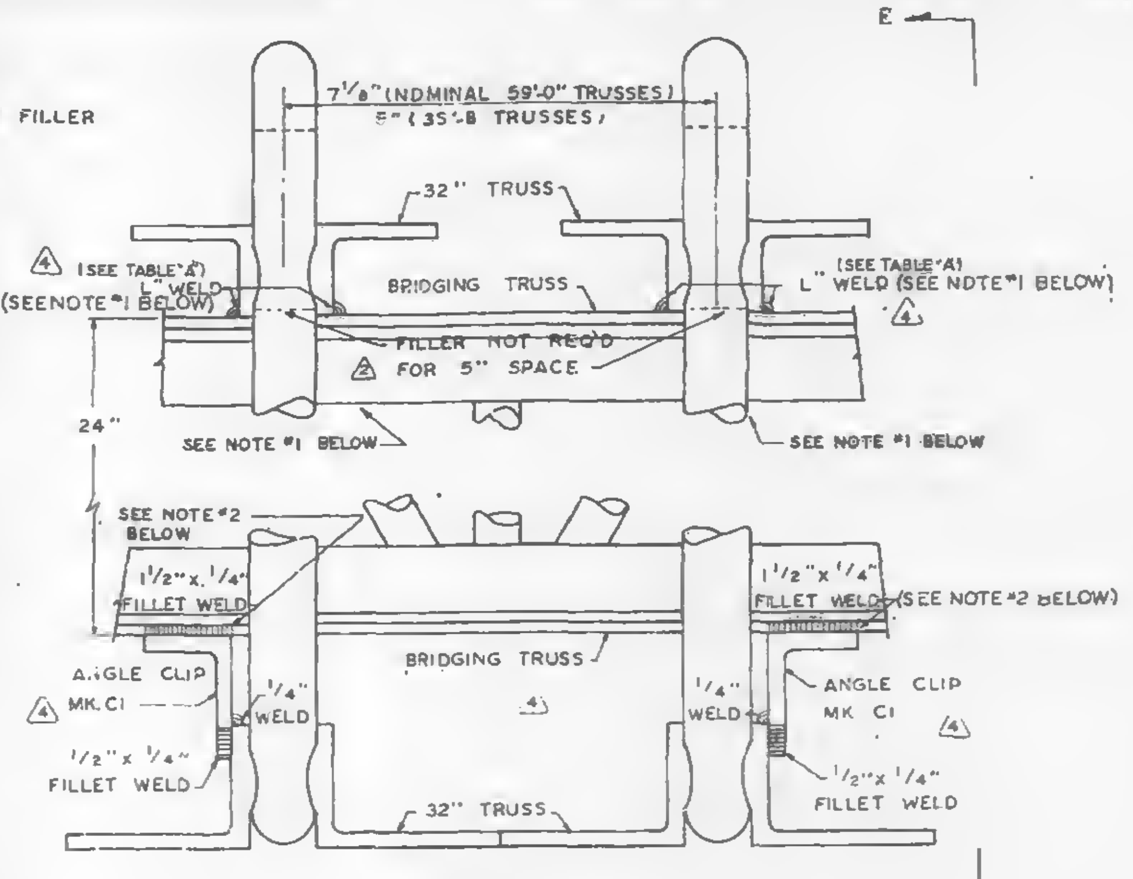
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB ②, 5-C, 6C ⑤
& 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE 7/16/69	DRAWN BY ______ DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY. T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO.: CD 201


32" TRUSS
ADDED Ø FILLER
1 1/2" x L" FILLET WELD (SEE TABLE 'A')
BRIDGING TRUSS
CLIP C1: 2"x 1 1/2" x 1/4" x 0'-6"
CLIP C2: 2 1/2" x 1 1/2" x 1/4" x 0'-6"
1/4" WELD
1/4" WELD
1" x 1/4" FILLET WELD
1/2" x 1/4" FILLET WELD
32" TRUSS

SECTION E-E



5-C

INTERIOR BRIDGING TRUSS CONNECTION

(CENTER OF PANEL)
(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 6-C IN F & FR PANELS.)

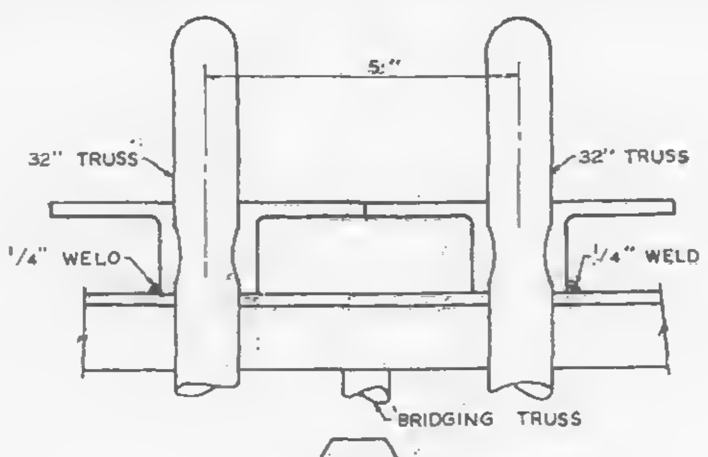
NOTES:

4 #1 24T10 THRU 24T10L DO NOT HAVE A TOP CHORD PLATE.

#2 24T14, T14B, T15, T15A & T16 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

4 TABLE "A"

"L"	LOCATION
1/4"	PANELS: D1, DR1, E1, ER1, F1, FR1, G1, GR1, D5, DR5, E5, ER5, F5 & FR5
5/16"	PANELS: D3, DR3, D8, E3, ER3, E8, ~~ER8~~, F8, FR8, F3 & FR3
3/8"	PANEL: DR8, ER8

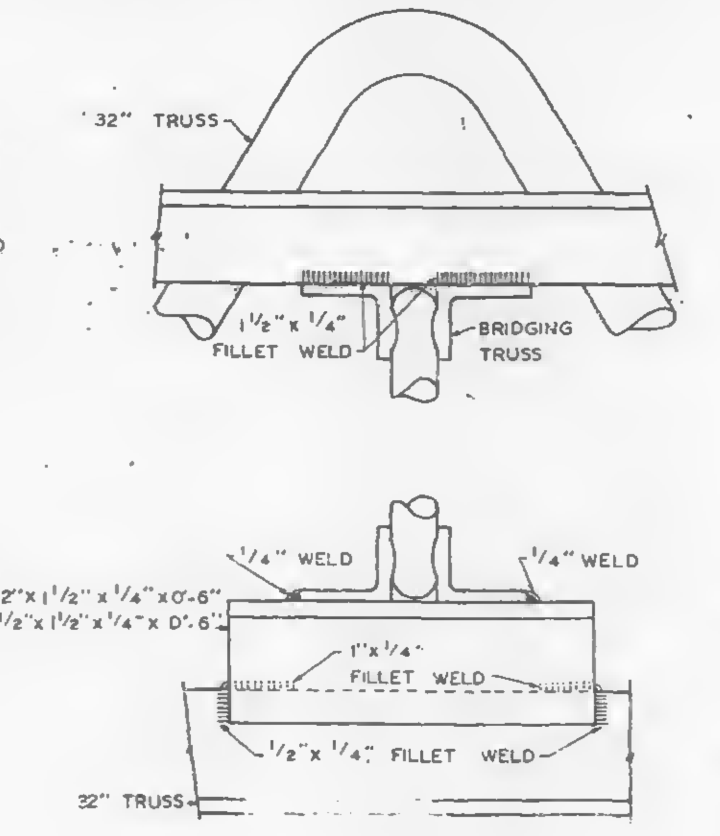


4-CB

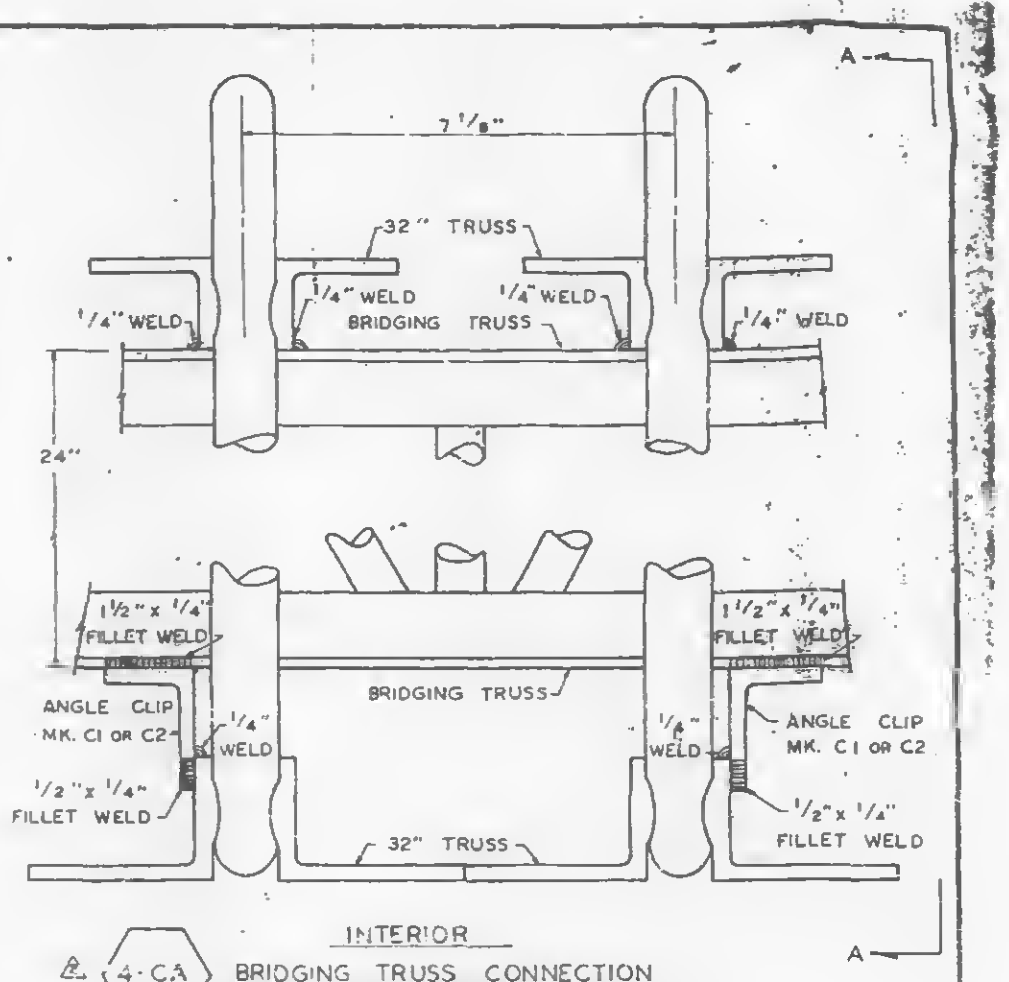
INTERIOR BRIDGING TRUSS CONNECTION

(CENTER OF PANEL 5" C. TO C.)
(PANELS H, HR, J, K, KR, M AND MR)

C1 = 2"x 1 1/2" x 1/4" x 0'-6"
C2 = 2 1/2" x 1 1/2" x 1/4" x 0'-6"



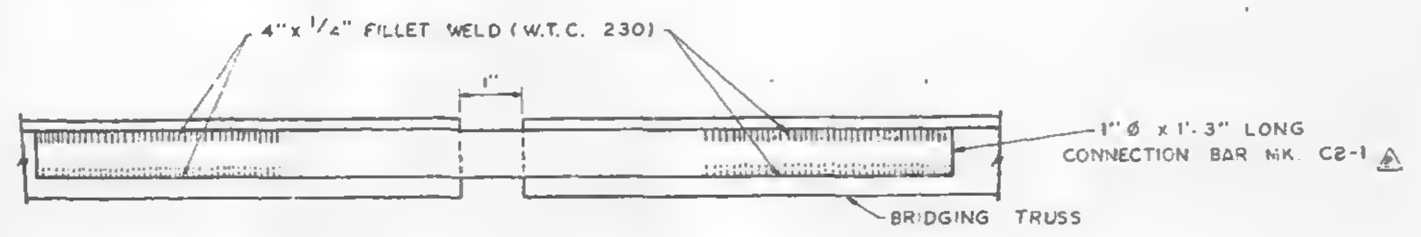
SECTION A-A



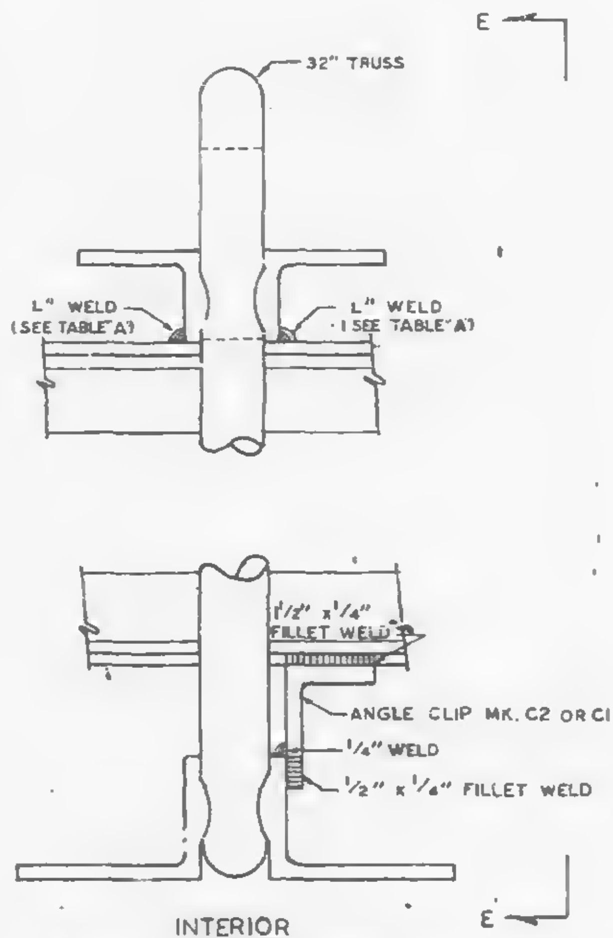
2 4-CA

INTERIOR BRIDGING TRUSS CONNECTION

(CENTER OF PANEL)
(7 1/8" C. TO C.)
2 (PANEL A, B, BR, C, CR, C, DR, E, ER, F & FR.


4" x 1/2" FILLET WELD (W.T.C. 230)
1"
1" Ø x 1'-3" LONG CONNECTION BAR MK. C2-1
BRIDGING TRUSS

SECTION X-X

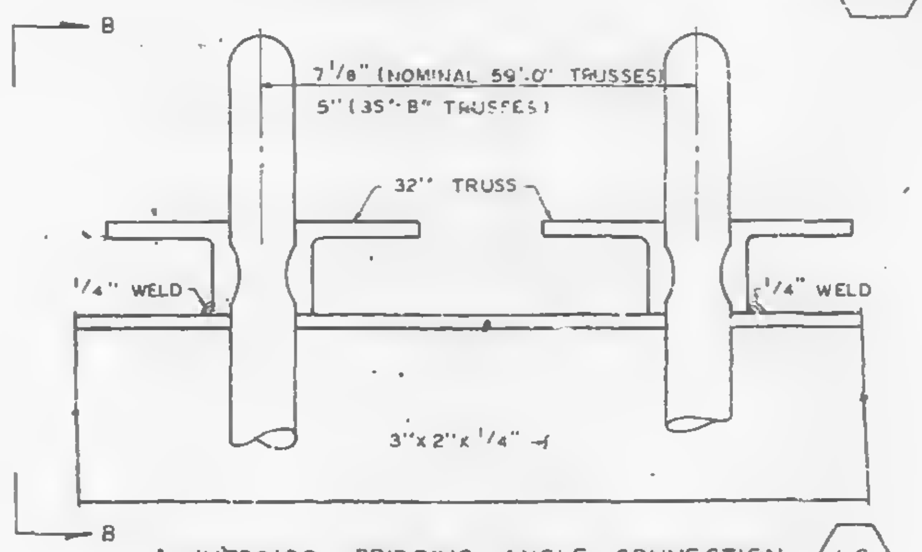


6-C

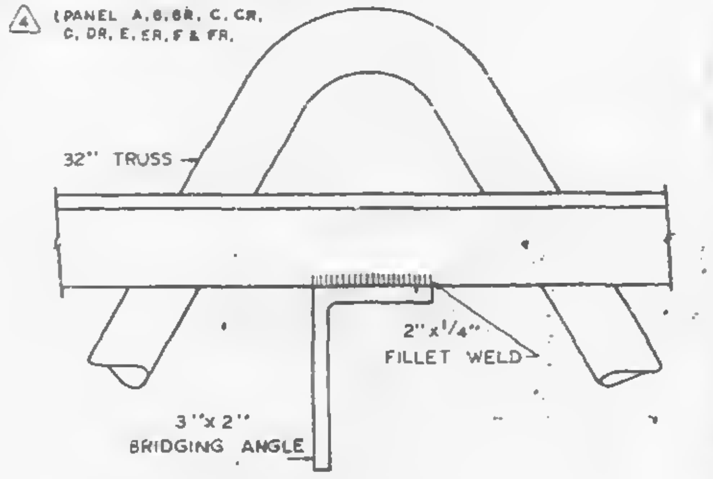
INTERIOR BRIDGING TRUSS CONNECTION

(24T CONNECTING TO 32" TRUSS)

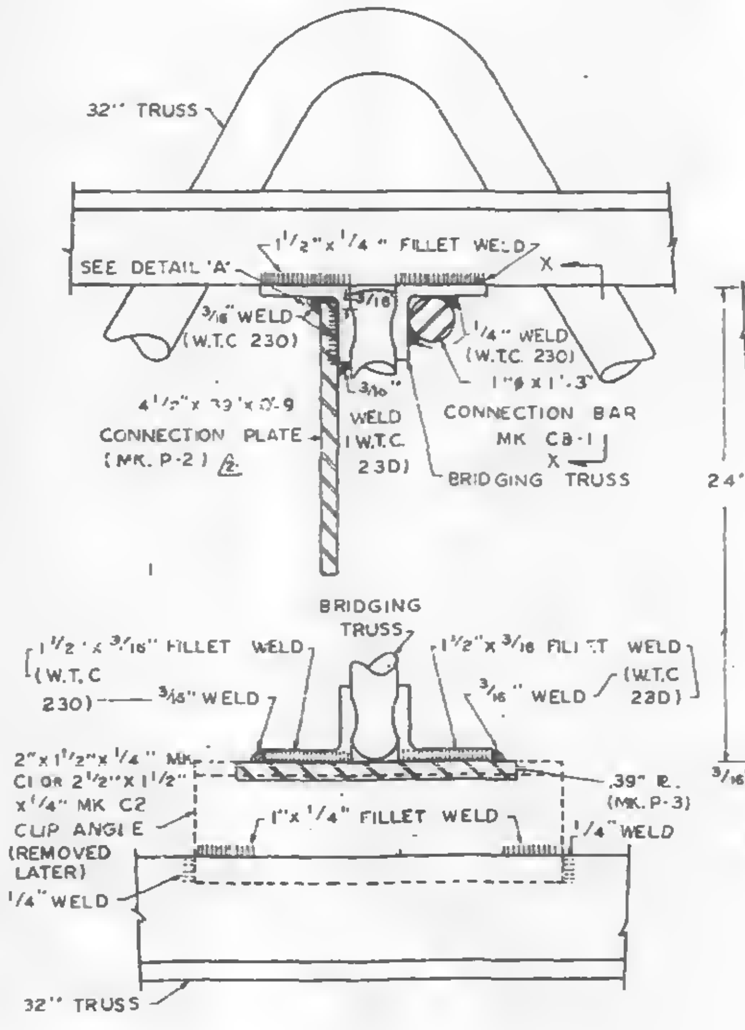
4 NOTE: 24T14 & T14B DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.



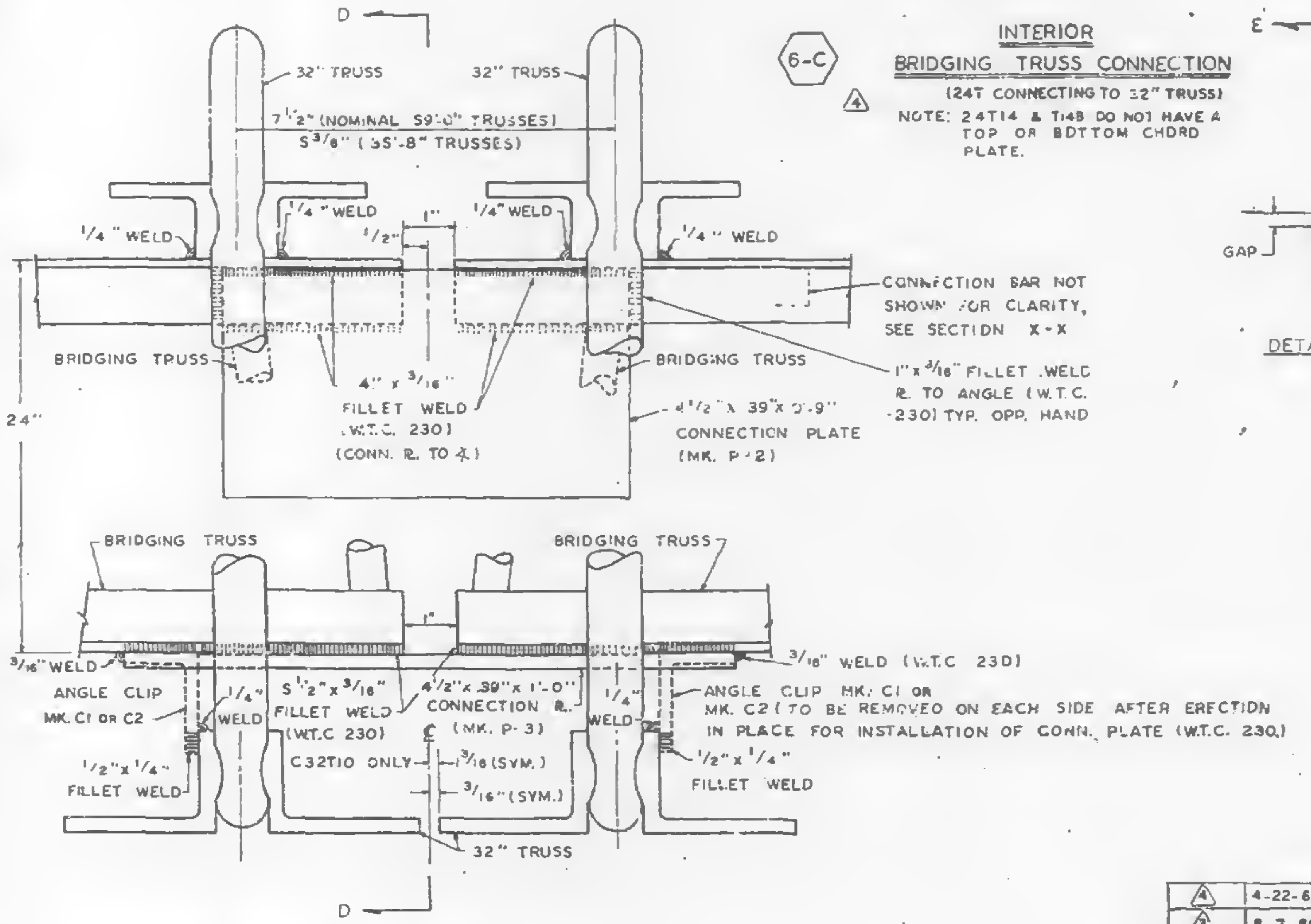
2 INTERIOR BRIDGING ANGLE CONNECTION 1-C
(CENTER OF PANEL)



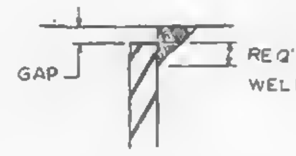
SECTION B-B



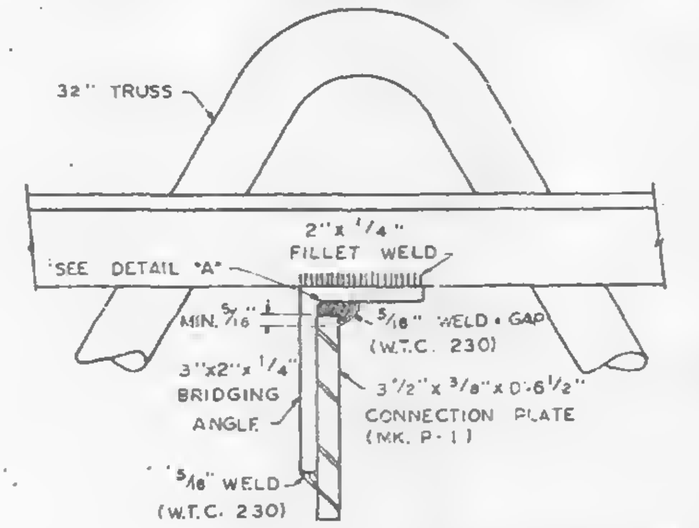
SECTION D-D


D
32" TRUSS
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1/2"
1"
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
BRIDGING TRUSS
BRIDGING TRUSS
4" x 3/16" FILLET WELD (W.T.C. 230) (CONN. Ⓟ TO Ⓛ)
1" x 3/16" FILLET WELD Ⓟ TO ANGLE (W.T.C. 230) TYP. OPP. HAND
4 1/2" x 39" x 0'-9" CONNECTION PLATE (MK. P-2)
24"
BRIDGING TRUSS
BRIDGING TRUSS
3/16" WELD
3/16" WELD (W.T.C. 230)
ANGLE CLIP MK. C1 OR C2
1/4" WELD
5 1/2" x 3/16" FILLET WELD (W.T.C. 230)
4 1/2" x .39" x 1'-0" CONNECTION Ⓟ (MK. P-3)
1/4" WELD
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230.)
1/2" x 1/4" FILLET WELD
C32T10 ONLY
3/16 (SYM.)
3/16" (SYM.)
1/2" x 1/4" FILLET WELD
32" TRUSS
D

3 7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 16C & 17C) 4

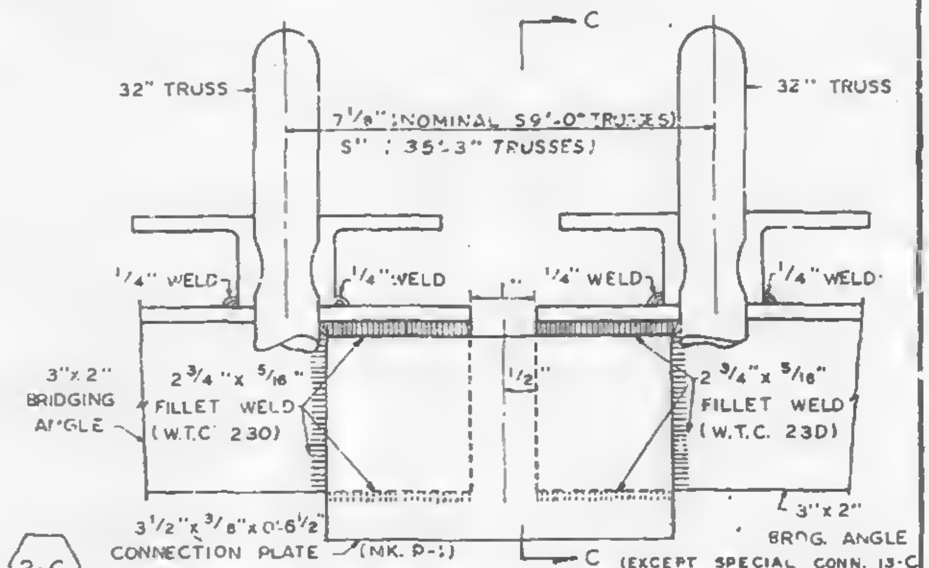


DETAIL "A"


32" TRUSS
2" x 1/4" FILLET WELD
SEE DETAIL "A"
MIN. 5/16"
5/16" WELD + GAP (W.T.C. 230)
3" x 2" x 1/4" BRIDGING ANGLE
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE (MK. P-1)
5/16" WELD (W.T.C. 230)

SECTION C-C

SKILLING - HELLE CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
APPROVED
X APPROVED AS NOTED
[illegible]
6/4/69 SK


C
32" TRUSS
7 1/8" (NOMINAL 59'-0" TRUSSES)
5" (35'-3" TRUSSES)
32" TRUSS
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1/2"
3" x 2" BRIDGING ANGLE
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE (MK. P-1)
3" x 2" BRDG. ANGLE
C (EXCEPT SPECIAL CONN. 13-C 14-C & 15-C)

2 2-C PANEL JOINT BRIDGING ANGLE CONNECTION

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

3

2 4. ALL PLATES & Ø SPLICE BARS TO BE ASTM A36.

2 5. SEE SHEET CD-2D2 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

4 REF. DRWG.

7-AB4-15 7-22-68
7-AB4-16 7-22-68

NO.	DATE	REVISION	BY
4	4-22-69	AS NOTED	G.D.C.
3	8-7-68	AS NOTED	G.D.C.
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

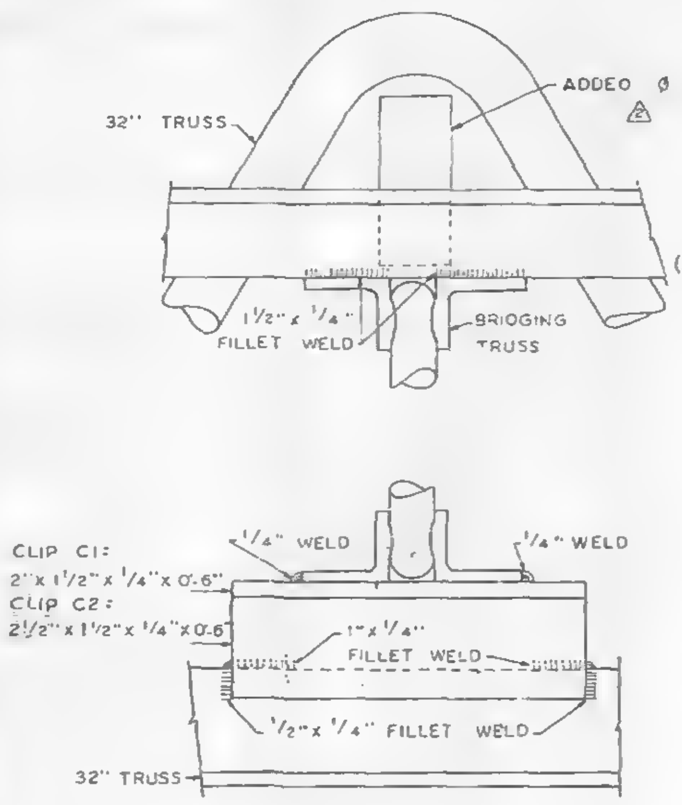
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C, 6C 2 3
& 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

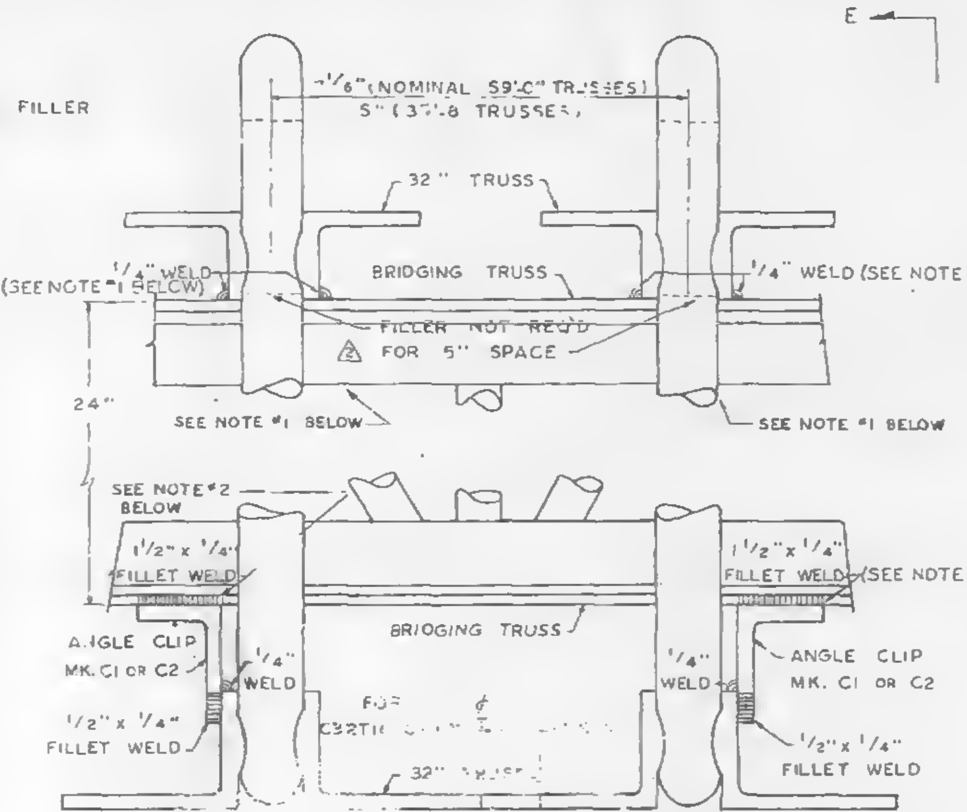
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE.	DRAWN BY: L.R. DATE: MAY 14 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: [illegible]		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD 201

0 710-771

WTC1-131-LERA



SECTION E-E

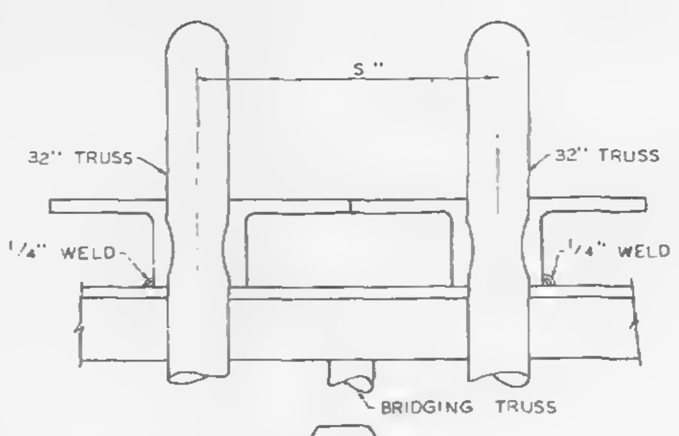


5-C

INTERIOR
BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 6-C IN F & FR PANELS.)

NOTES:

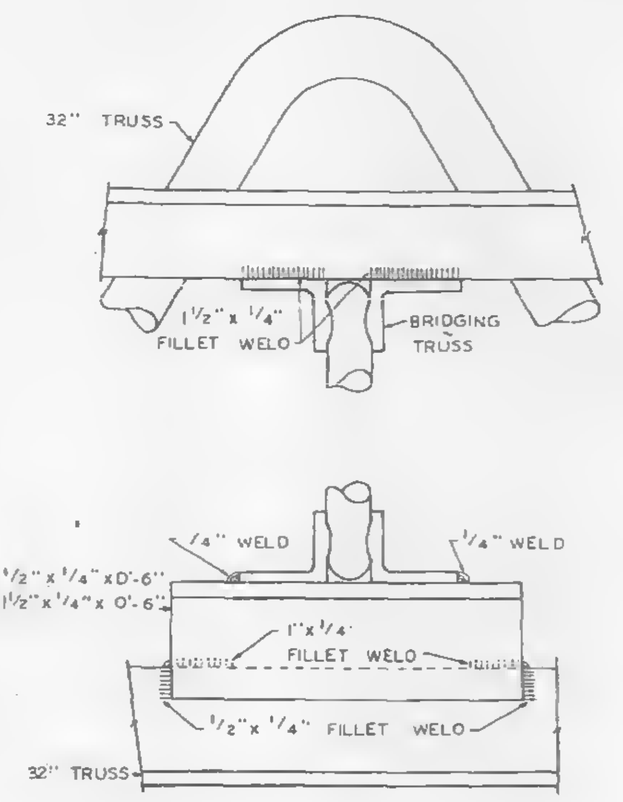
- #1 24T10, 24T10A, 24T10B DO NOT HAVE A TOP CHORD PLATE.
- #2 24T14, 24T15, 24T16 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.



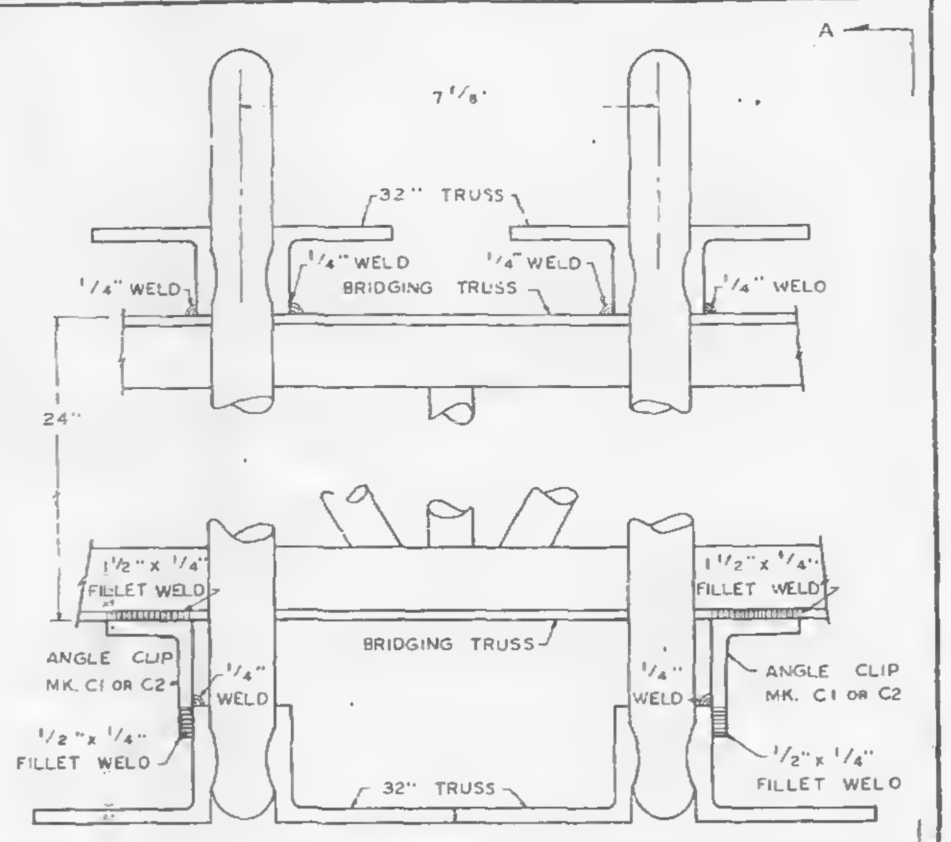
4-CB

INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" ℄ TO ℄)
(PANELS H, HR, J, K, KR, M AND MR)

C1 = 2"x1½"x¼"x0'-6"
C2 = 2½"x1½"x¼"x0'-6"

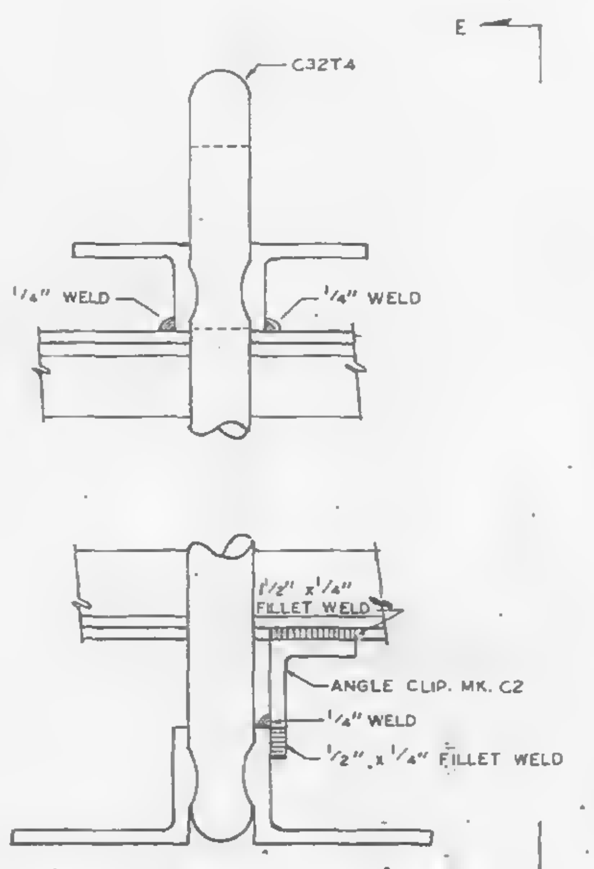


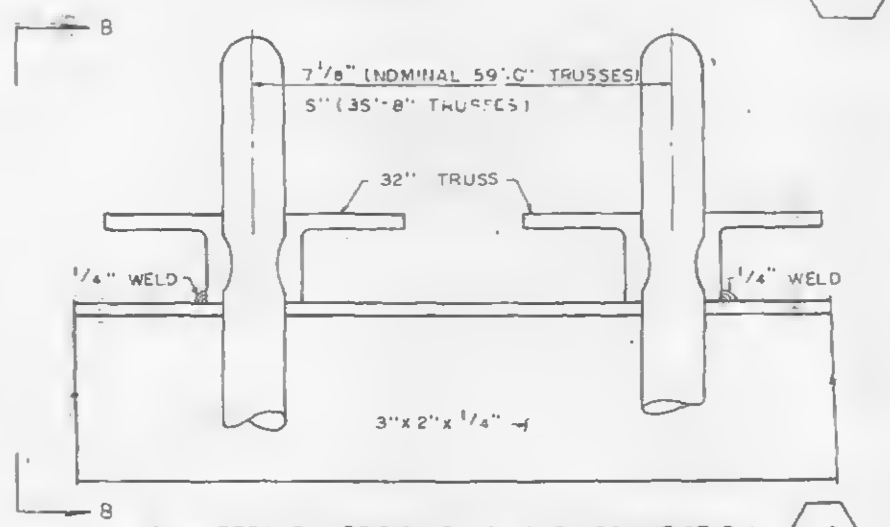
SECTION A-A



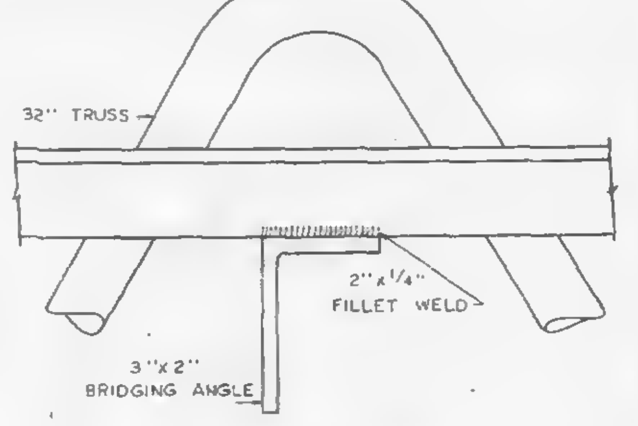
4-CA

INTERIOR
BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7⅛" ℄ TO ℄)
(PANEL A, B, BR, C AND CR)

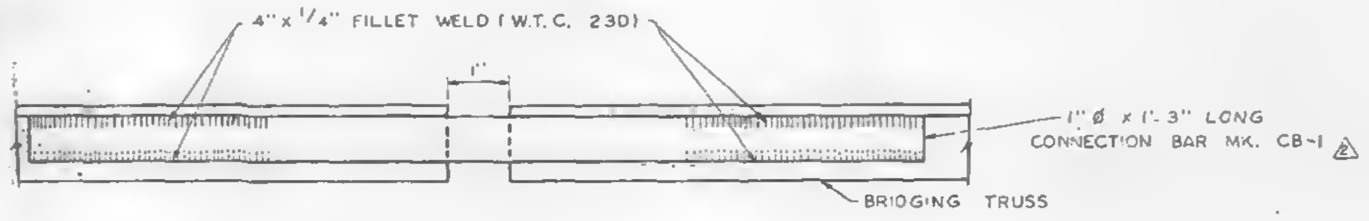




INTERIOR BRIDGING ANGLE CONNECTION (CENTER OF PANEL) 1-C



SECTION B-B



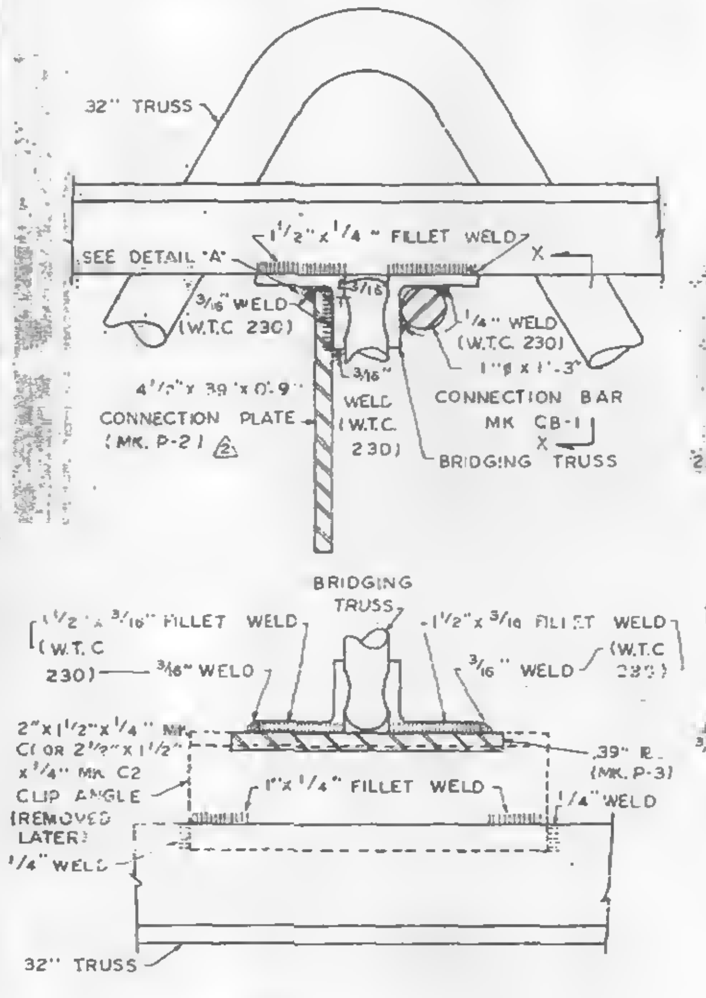
4"x¼" FILLET WELD (W.T.C. 230)
1"
1"ϕ x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

SECTION X-X

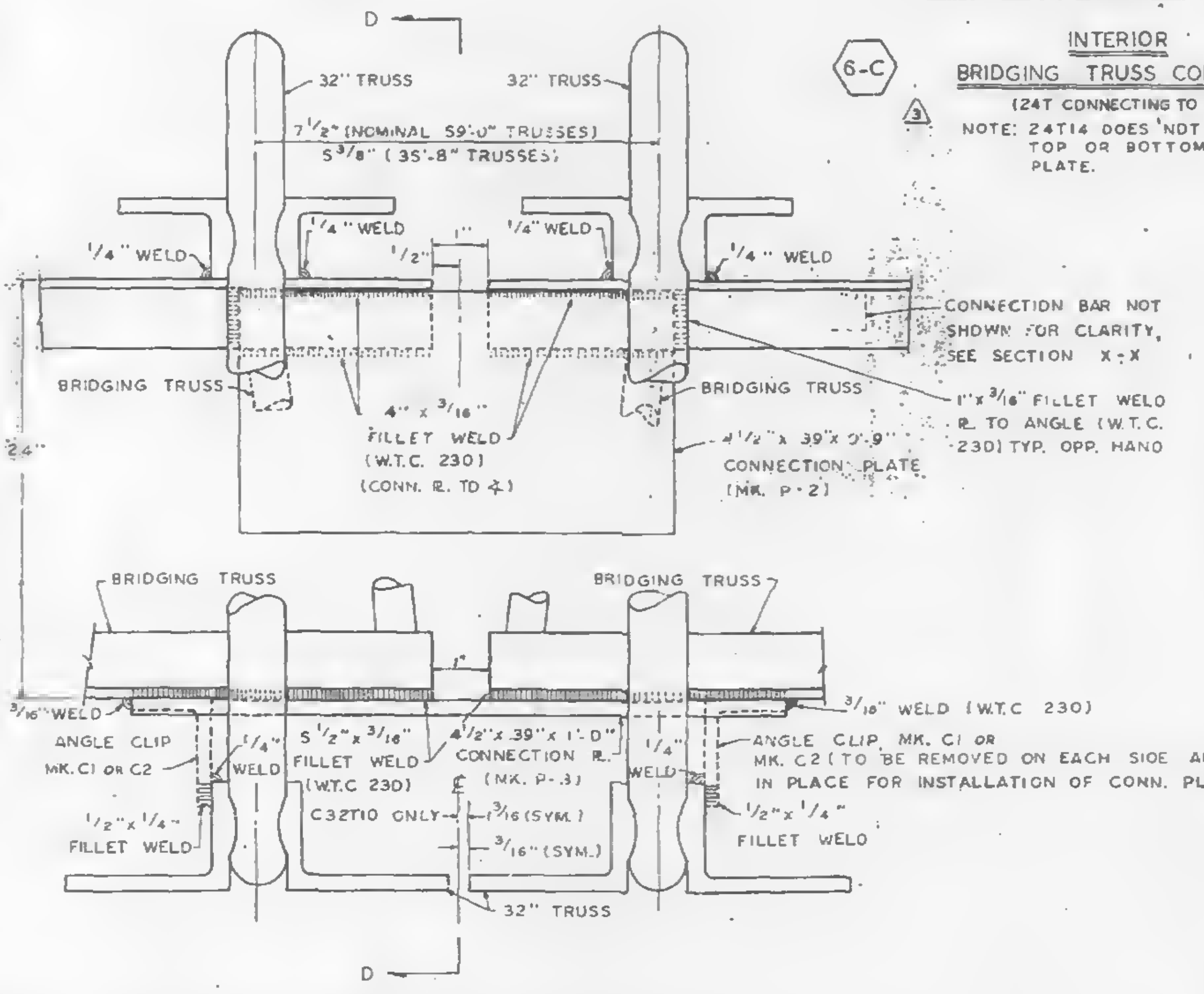
INTERIOR
BRIDGING TRUSS CONNECTION
(24T CONNECTING TO C32T4)

NOTE: 24T14 DOES NOT HAVE A TOP OR BOTTOM CHORD PLATE.

6-C

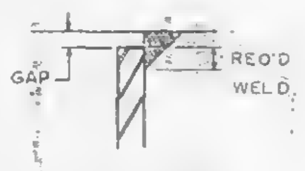


SECTION D-D

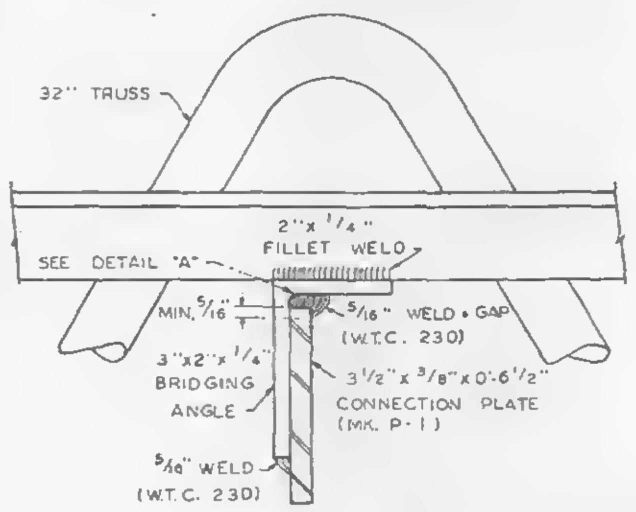


D
32" TRUSS
32" TRUSS
7½" (NOMINAL 59'-0" TRUSSES)
5⅜" (35'-8" TRUSSES)
¼" WELD
¼" WELD
¼" WELD
¼" WELD
½"
1"
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
BRIDGING TRUSS
BRIDGING TRUSS
4"x3/16" FILLET WELD (W.T.C. 230) (CONN. R. TO ⊥)
1"x3/16" FILLET WELD R. TO ANGLE (W.T.C. 230) TYP. OPP. HAND
4½"x 39"x 0'-9" CONNECTION PLATE (MK. P-2)
24"
BRIDGING TRUSS
BRIDGING TRUSS
3/16" WELD
3/16" WELD (W.T.C. 230)
ANGLE CLIP MK. C1 or C2
¼" WELD
5½"x3/16" FILLET WELD (W.T.C. 230)
4½"x 39"x 1'-0" CONNECTION R. (MK. P-3)
C32T10 ONLY
3/16 (SYM.)
3/16" (SYM.)
¼" WELD
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230.)
½"x¼" FILLET WELD
½"x¼" FILLET WELD
32" TRUSS
D

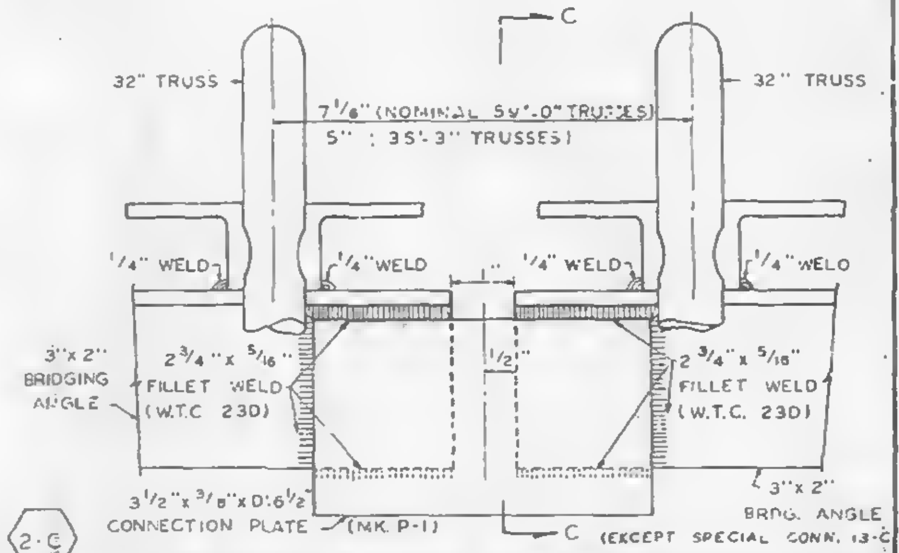
7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 16C & 17C)



DETAIL "A"



SECTION C-C



C
32" TRUSS
32" TRUSS
7⅛" (NOMINAL 59'-0" TRUSSES)
5" (35'-3" TRUSSES)
¼" WELD
¼" WELD
¼" WELD
¼" WELD
3"x2" BRIDGING ANGLE
2¾"x5/16" FILLET WELD (W.T.C. 230)
½"
2¾"x5/16" FILLET WELD (W.T.C. 230)
3"x2" BRDG. ANGLE
3½"x3/8"x0'-6½" CONNECTION PLATE (MK. P-1)
C

2-C PANEL JOINT BRIDGING ANGLE CONNECTION (EXCEPT SPECIAL CONN. 13-C, 14-C & 15-C)

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
4. ALL PLATES & ϕ SPLICE BARS TO BE ASTM A36.
5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF DRWG.

7-AB4-15	5-5-68
7-AB4-16	5-6-68

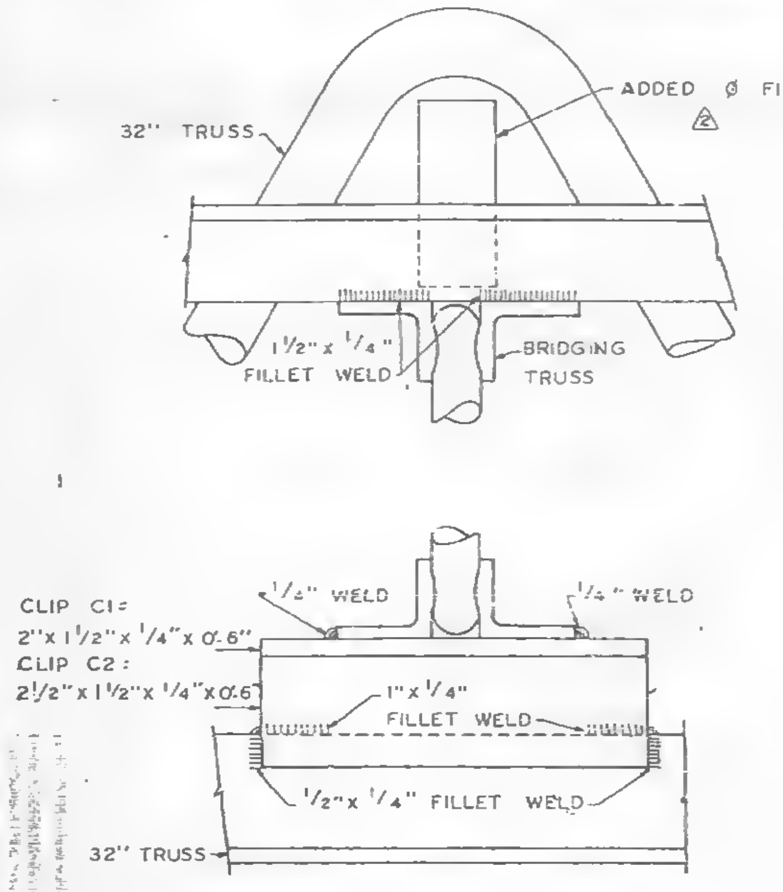
NO.	DATE	REVISION	BY
3	8-7-68	AS NOTED	G.D.C.
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

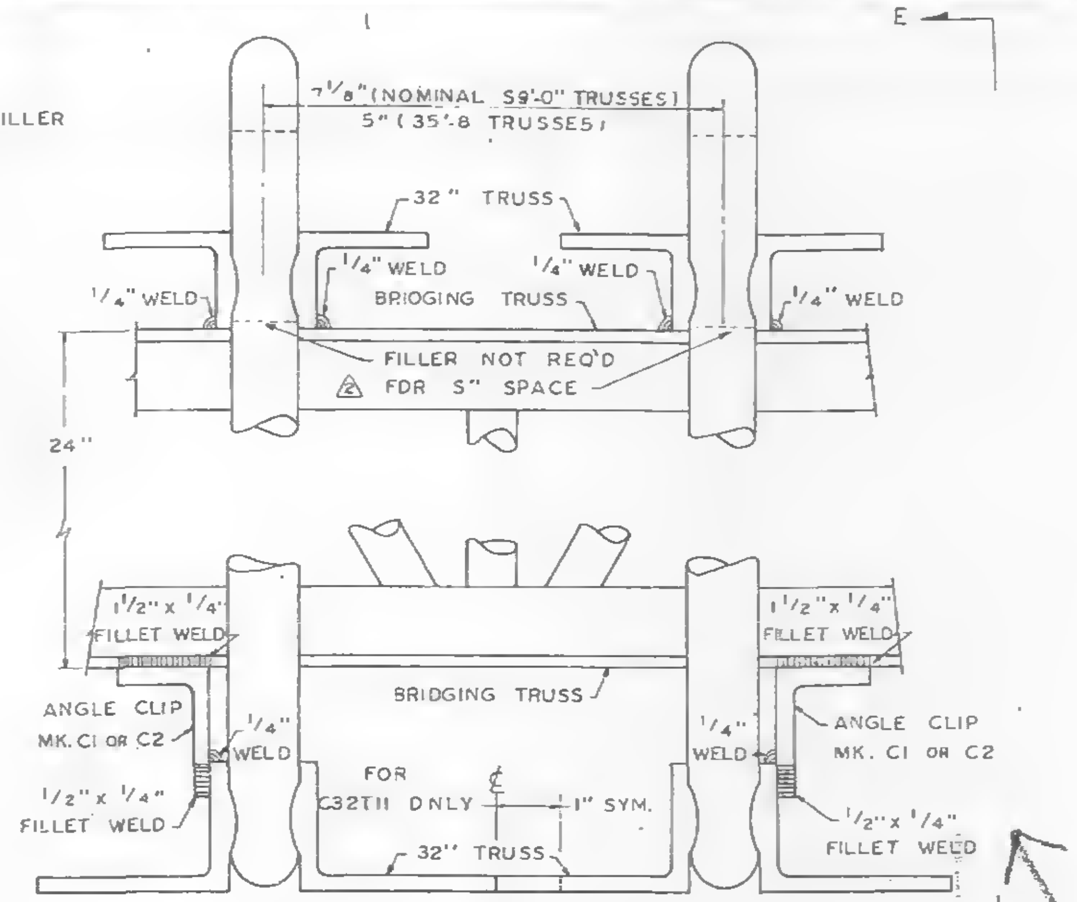
STANDARD CONNECTION DETAILS 1-C, 2C, 4 CA, 4-CB, 5-C, 6C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

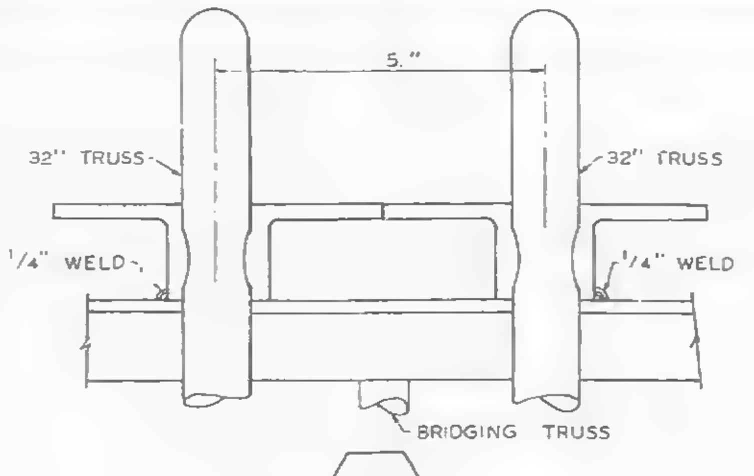
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 8/29/68	DRAWN BY lwh DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY. T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD 201



SECTION E-E



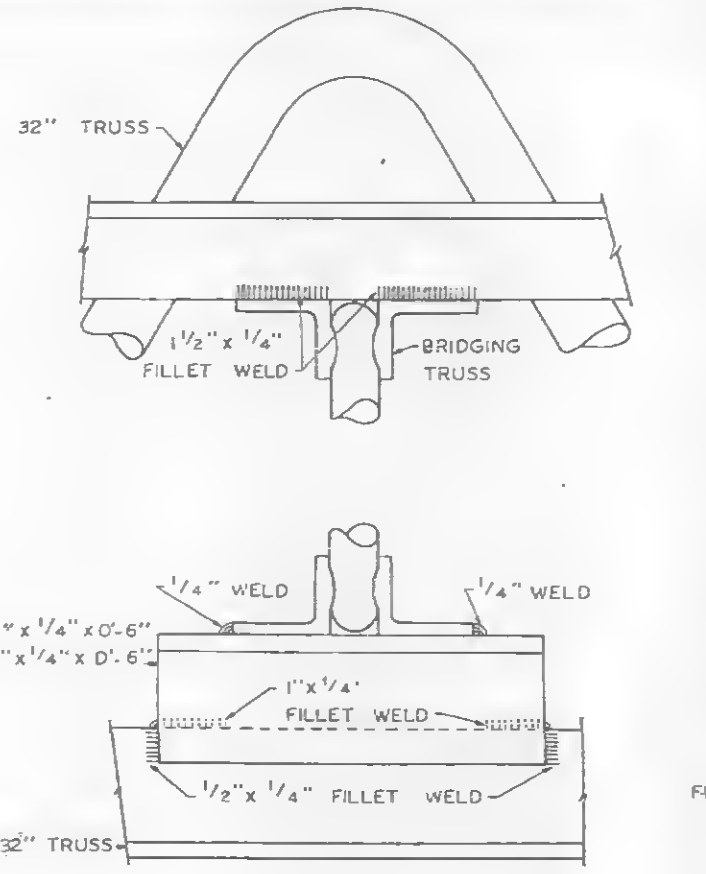
5-C INTERIOR BRIDGING TRUSS CONNECTION (PANEL D, DR, F, FR, G AND GR)



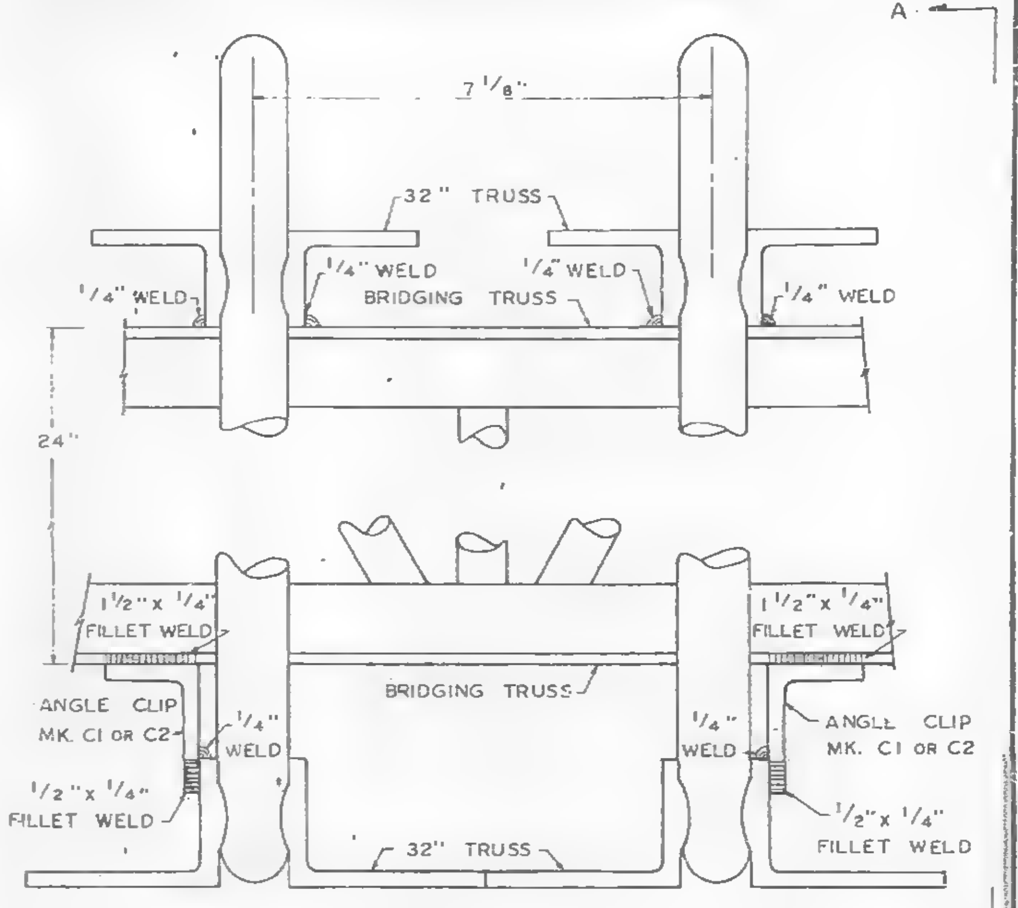
4-CB INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" ℄ TO ℄)
(PANELS H, HR, J, K, KR, M AND MR)

C1 = 2"x1 1/2"x1/4"x0'-6"
C2 = 2 1/2"x1 1/2"x1/4"x0'-6"

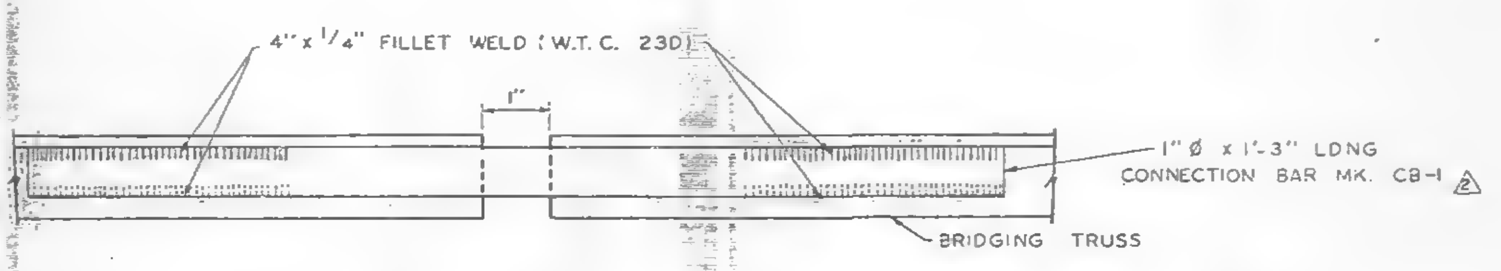
Indicate details for cover plated 24T trusses and for 24T to 32T4 truss connection.



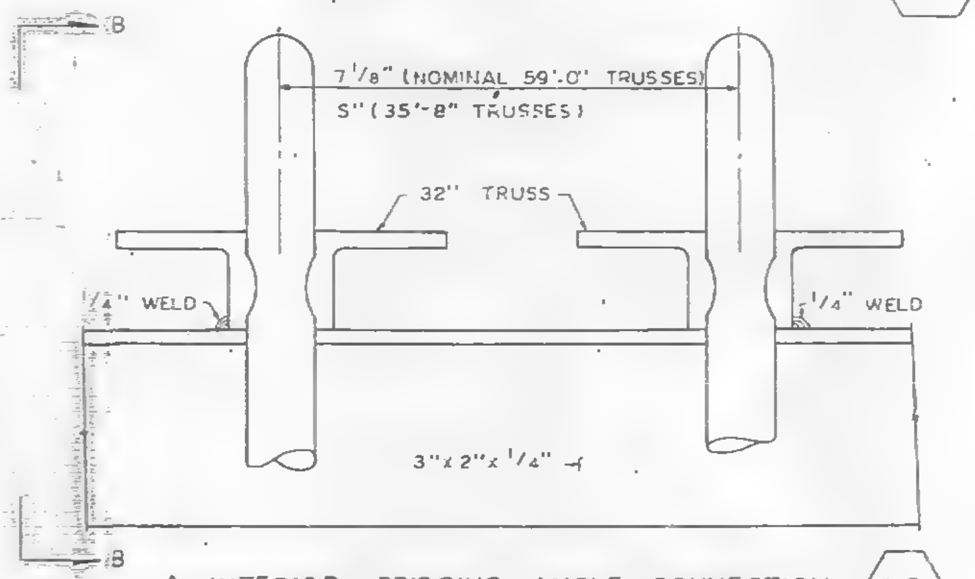
SECTION A-A



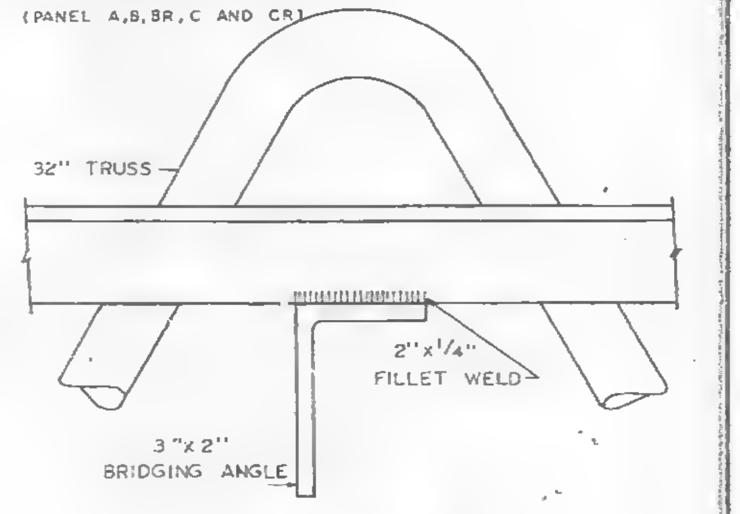
4-CA INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7 1/8" ℄ TO ℄)
(PANEL A, B, BR, C AND CR)


4" x 1/4" FILLET WELD (W.T.C. 230)
1"
1" ∅ x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

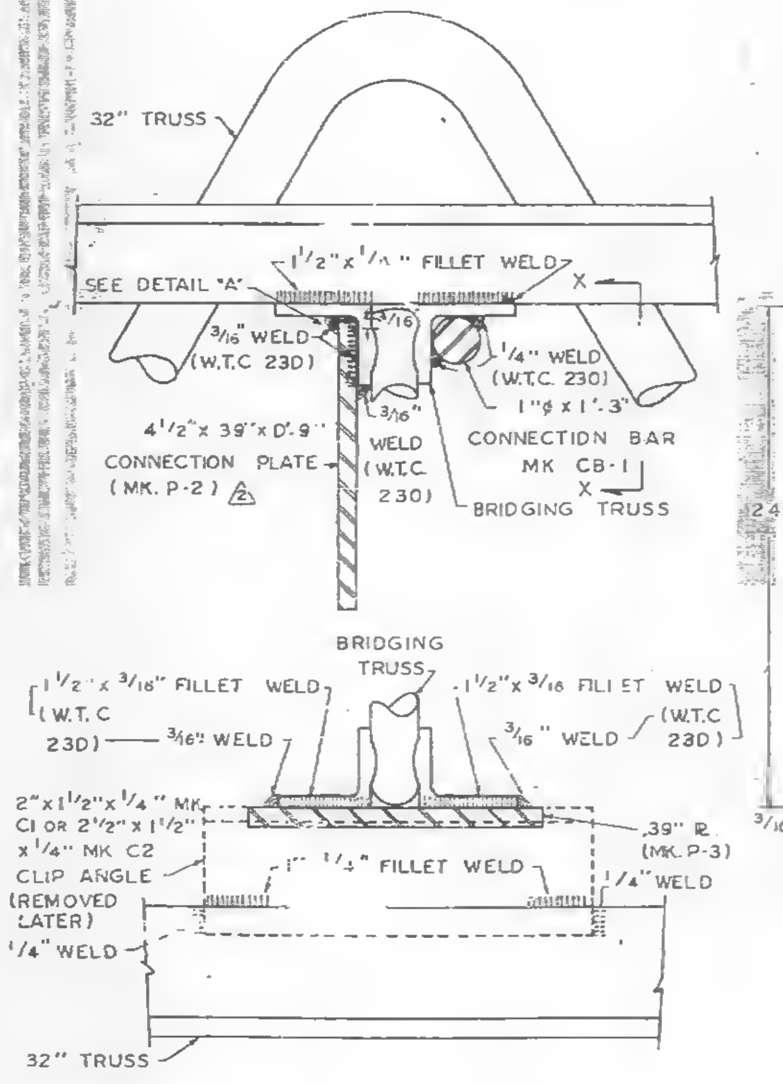
SECTION X-X



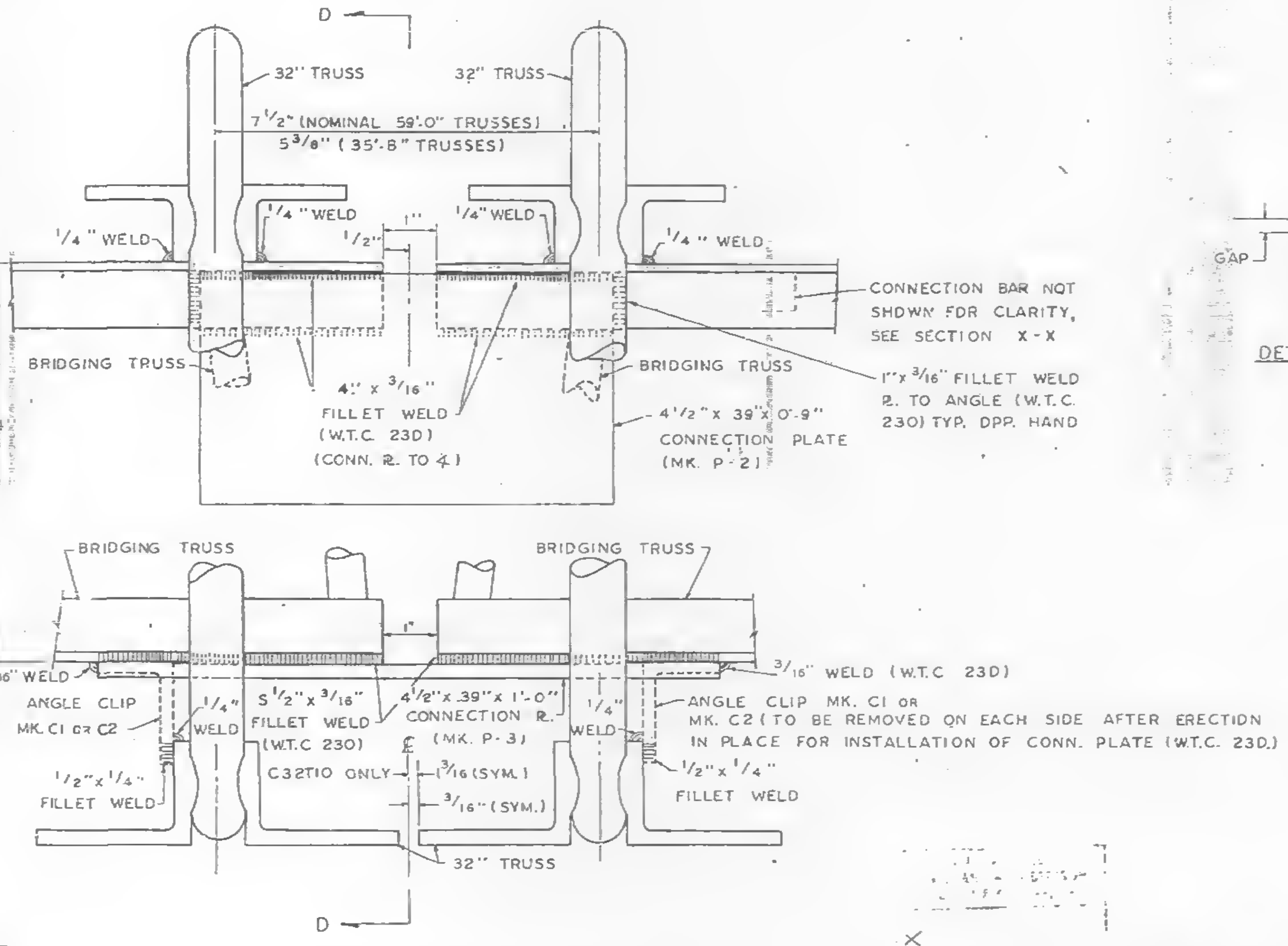
1-C INTERIOR BRIDGING ANGLE CONNECTION (CENTER OF PANEL)



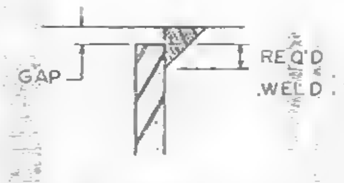
SECTION B-B



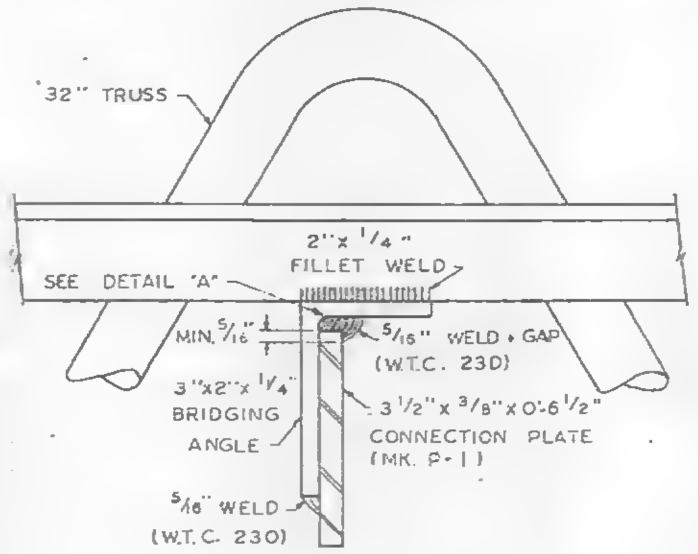
SECTION D-D


D
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
1/4" WELD
1/2"
1"
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
BRIDGING TRUSS
4" x 3/16" FILLET WELD (W.T.C 230) (CONN. Ⅎ. TO ∡)
1"x3/16" FILLET WELD Ⅎ. TO ANGLE (W.T.C. 230) TYP. OPP. HAND
4 1/2"x 3/8"x 0'-9" CONNECTION PLATE (MK. P-2)
24"
3/16" WELD
ANGLE CLIP MK. C1 OR C2
5 1/2"x 3/16" FILLET WELD (W.T.C 230)
4 1/2"x.39"x1'-0" CONNECTION Ⅎ. (MK. P-3)
C32T10 ONLY
3/16 (SYM.)
1/2"x1/4" FILLET WELD
3/16" WELD (W.T.C 230)
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230.)
32" TRUSS
D

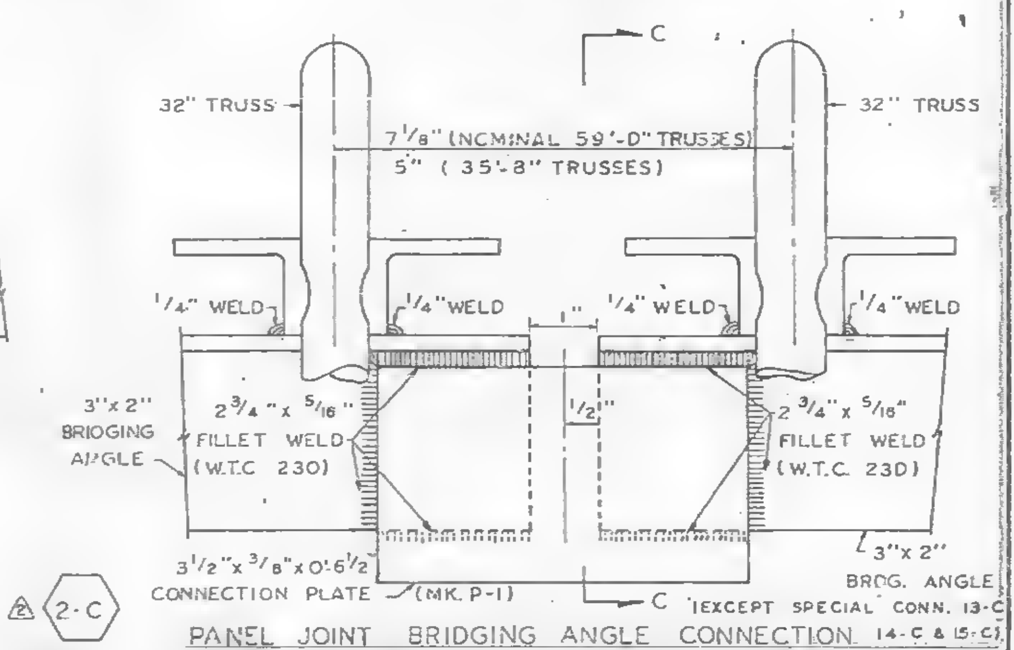
7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 10C, 11C, 16C & 17C)



DETAIL "A"


32" TRUSS
2"x1/4" FILLET WELD
SEE DETAIL "A"
MIN. 5/16"
5/16" WELD + GAP (W.T.C. 230)
3"x2"x1/4" BRIDGING ANGLE
3 1/2"x 3/8"x0'-6 1/2" CONNECTION PLATE (MK. P-1)
5/16" WELD (W.T.C. 230)

SECTION C-C


C
32" TRUSS
7 1/8" (NOMINAL 59'-0" TRUSSES)
5" (35'-8" TRUSSES)
1/4" WELD
1"
1/2"
3"x2" BRIDGING ANGLE
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
3 1/2"x 3/8"x 0'-6 1/2" CONNECTION PLATE (MK. P-1)
3"x2" BRDG. ANGLE
C

2-C PANEL JOINT BRIDGING ANGLE CONNECTION (EXCEPT SPECIAL CONN. 13-C, 14-C & 15-C)

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1.
4. ALL PLATES & ∅ SPLICE BARS TO BE ASTM A36.
5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

7-AB4-15	5-6-68
7-AB4-16	5-6-68

X

7/12/68 SK

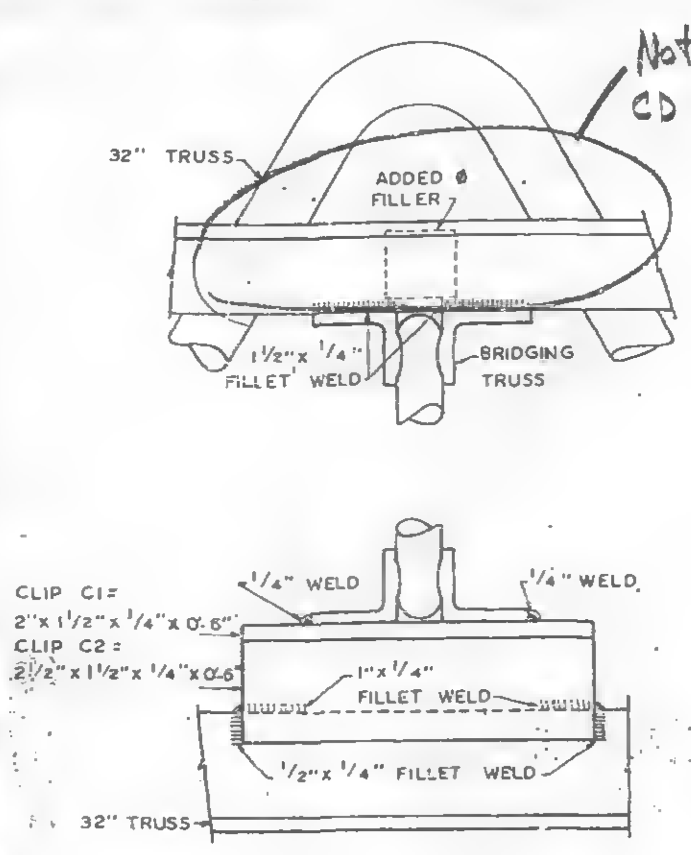
NO.	DATE	REVISION	BY
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

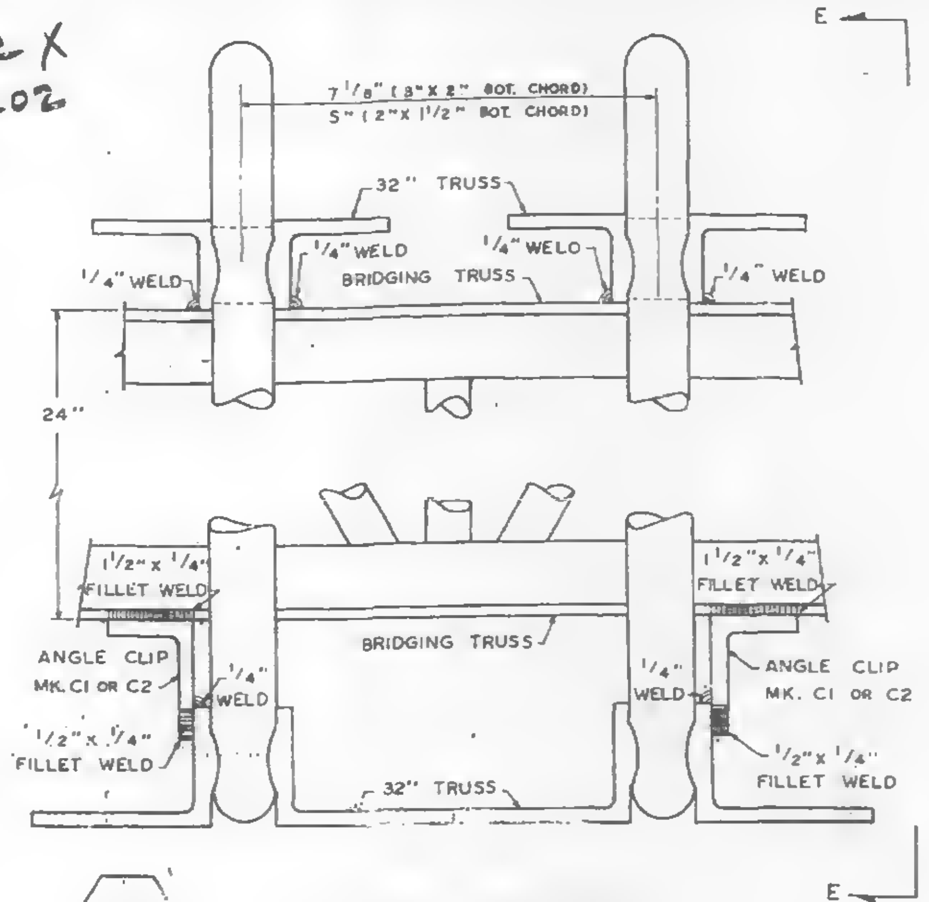
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. ____ PLATE ____	
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE. ____	DRAWN BY lwh DATE: MAY 14, 1958	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE ____	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO. CD 201

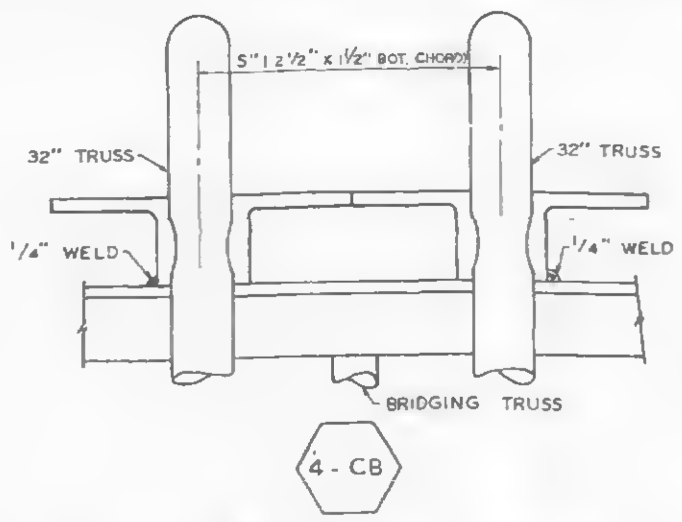


SECTION E - E



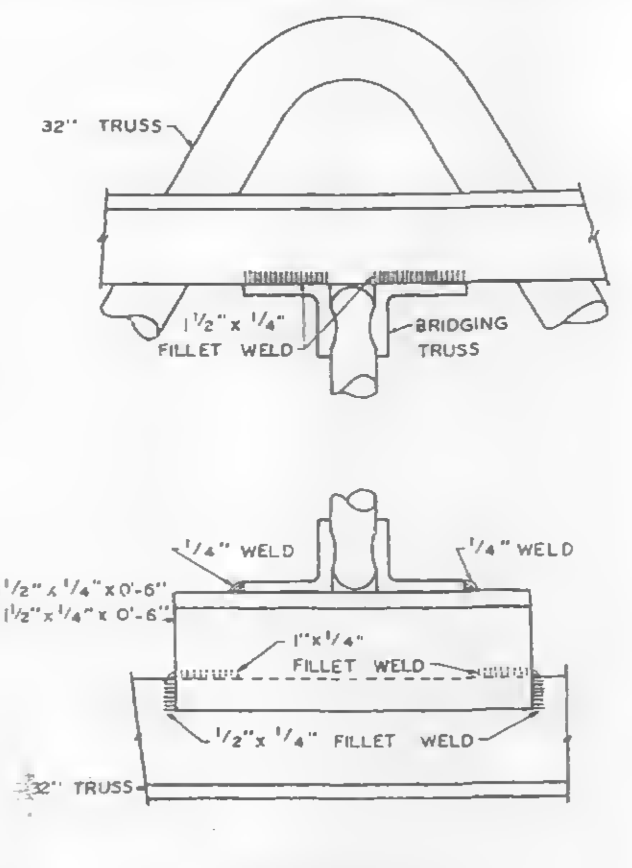
5-CA BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7 1/8" SPACE WITH FILLER)

5-CB TYP. TO DETAIL 5-CA EXCEPT
5" SPACE - WITHOUT FILLERS

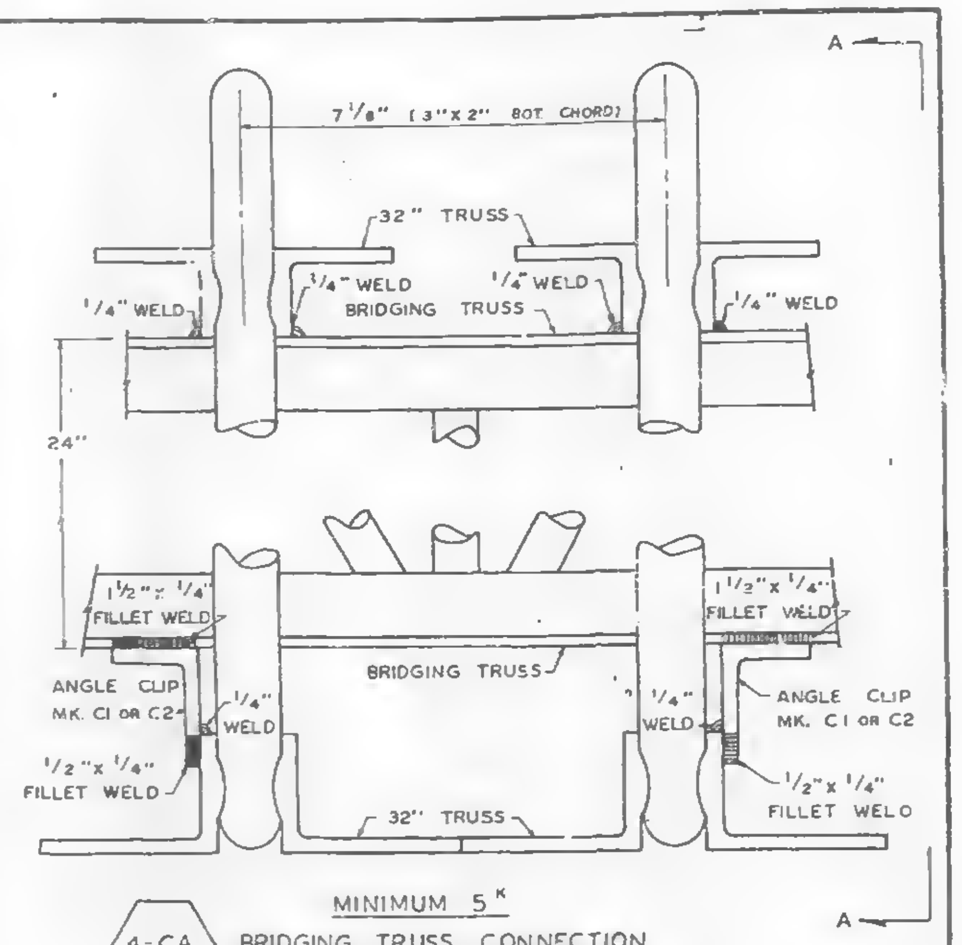


MINIMUM 5K BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" C TO C)

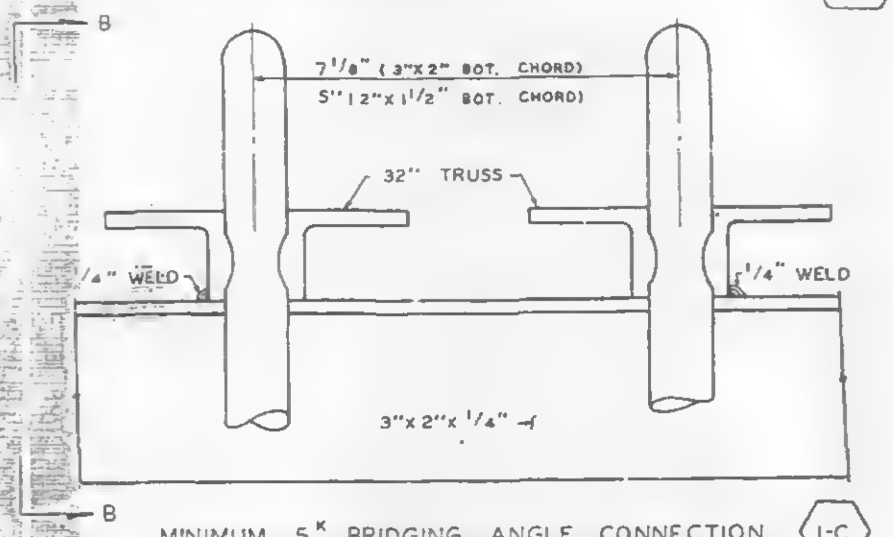
C1 = 2" x 1 1/2" x 1/4" x 0'-6"
C2 = 2 1/2" x 1 1/2" x 1/4" x 0'-6"



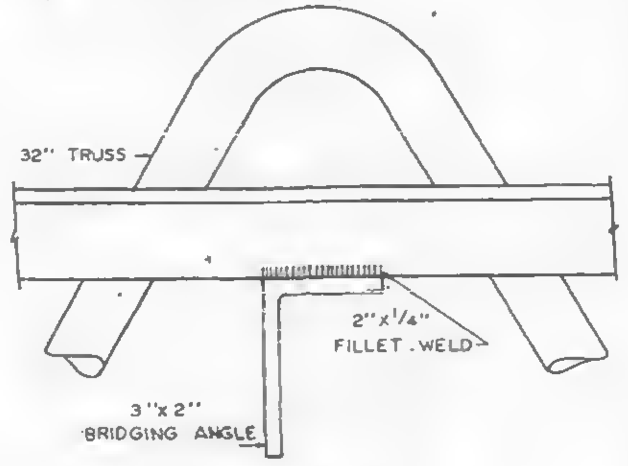
SECTION A - A



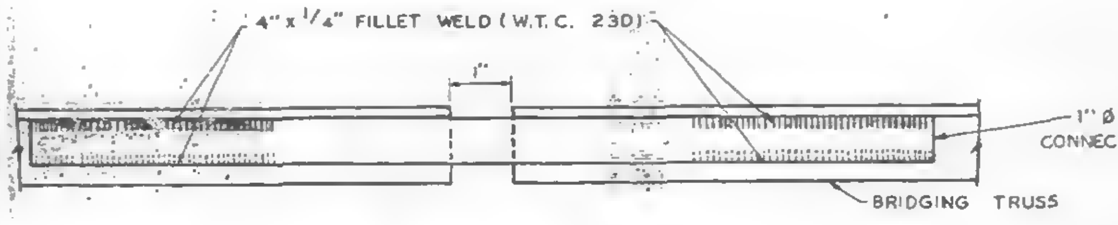
4-CA MINIMUM 5K BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7 1/8" C TO C)



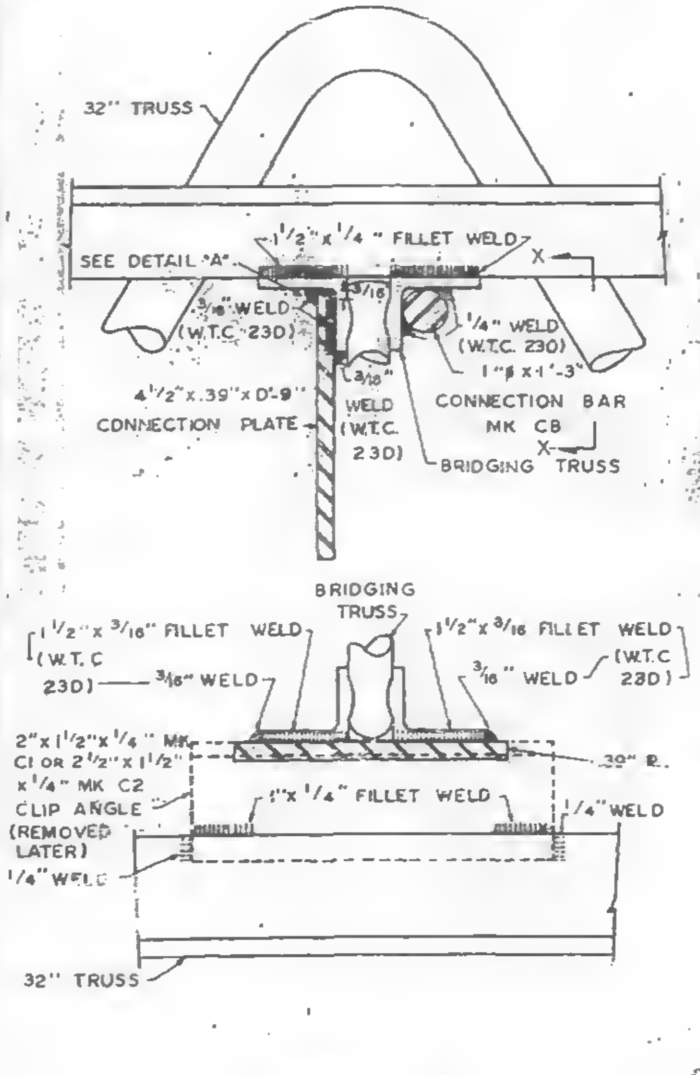
MINIMUM 5K BRIDGING ANGLE CONNECTION 1-C
(CENTER OF PANEL)



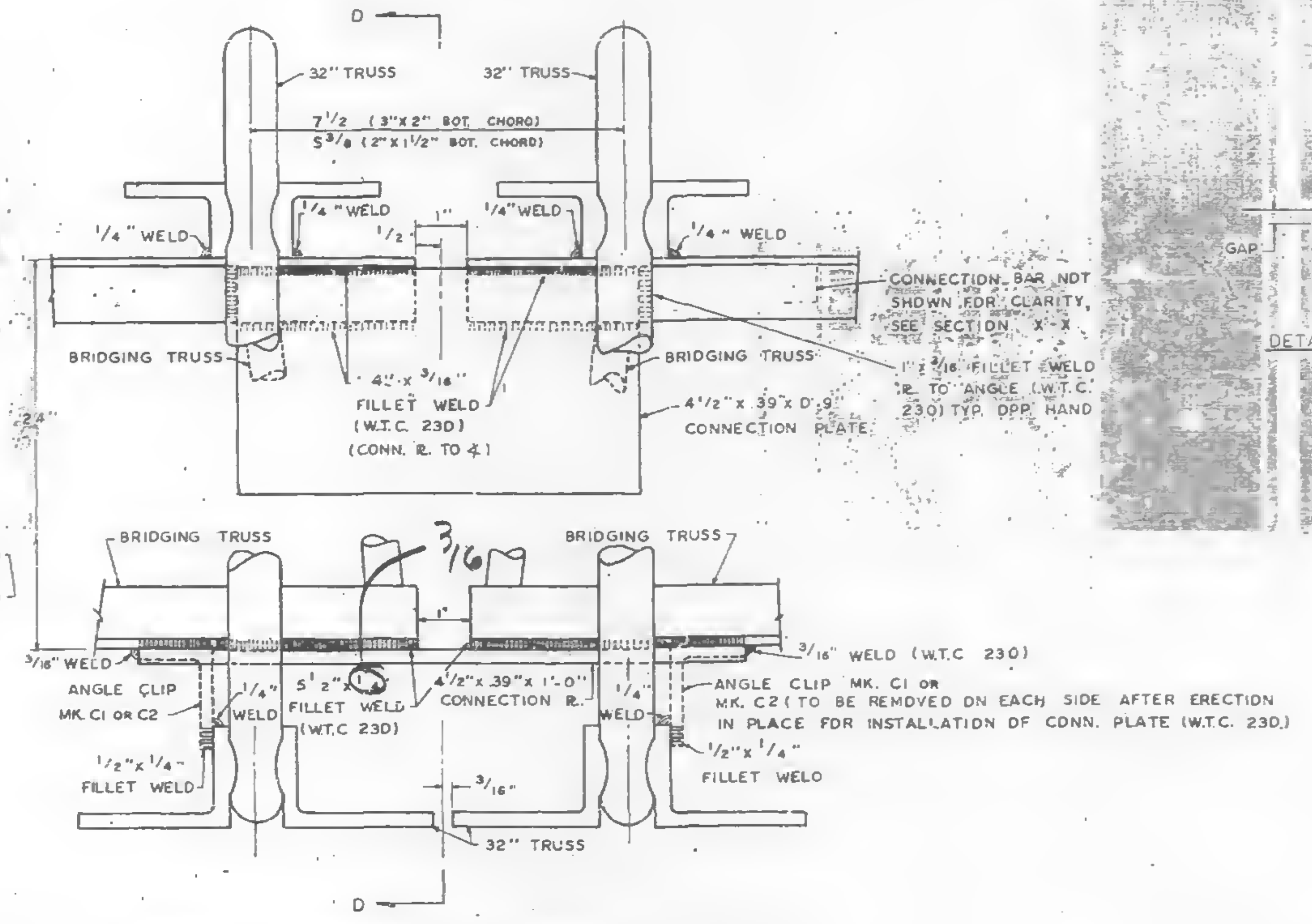
SECTION B - B


4" x 1/4" FILLET WELD (W.T.C. 230)
1"
1" Ø x 1'-3" LONG CONNECTION BAR MK. CB
BRIDGING TRUSS

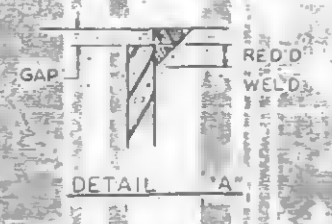
SECTION X - X


32" TRUSS
SEE DETAIL "A"
1/2" x 1/4" FILLET WELD
X
3/16" WELD (W.T.C. 230)
3/16
1/4" WELD (W.T.C. 230)
1" Ø x 1'-3" CONNECTION BAR MK CB
4 1/2" x .39" x 0'-9" CONNECTION PLATE
3/16" WELD (W.T.C. 230)
X
BRIDGING TRUSS
BRIDGING TRUSS
1 1/2" x 3/16" FILLET WELD (W.T.C 230)
3/16" WELD
1 1/2" x 3/16 FILLET WELD (W.T.C 230)
3/16" WELD
2" x 1 1/2" x 1/4" MK. C1 OR 2 1/2" x 1 1/2" x 1/4" MK C2 CLIP ANGLE (REMOVED LATER)
1" x 1/4" FILLET WELD
.39" R.
1/4" WELD
1/4" WELD
32" TRUSS

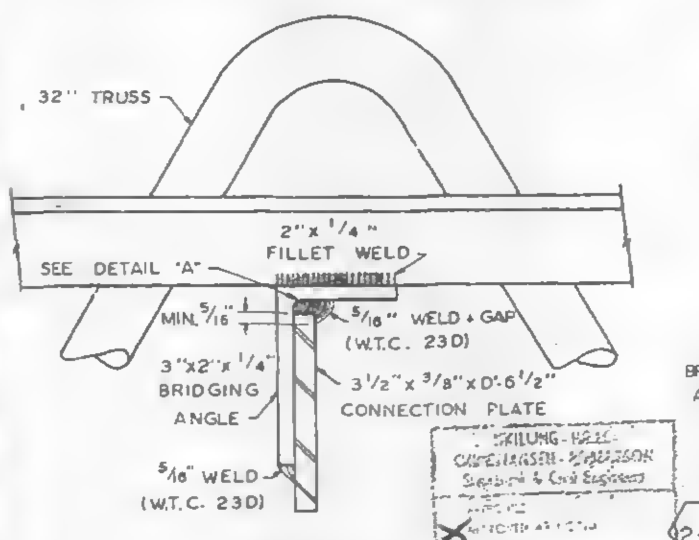
SECTION D - D


D
32" TRUSS
32" TRUSS
7 1/2 (3" x 2" BOT. CHORD)
5 3/8 (2" x 1 1/2" BOT. CHORD)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1/2
1"
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
BRIDGING TRUSS
BRIDGING TRUSS
4" x 3/16" FILLET WELD (W.T.C. 230) (CONN. PL. TO ⊄)
1" x 3/16" FILLET WELD PL. TO ANGLE (W.T.C. 230) TYP. OPP. HAND
4 1/2" x 39" x 0'-9 CONNECTION PLATE
24"
BRIDGING TRUSS
BRIDGING TRUSS
3/16
1"
3/16" WELD
3/16" WELD (W.T.C 230)
ANGLE CLIP MK. C1 OR C2
1/4" WELD
5" 2" x 3/16" FILLET WELD (W.T.C 230)
4 1/2" x .39" x 1'-0" CONNECTION PL.
1/4" WELD
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230)
1/2" x 1/4" FILLET WELD
3/16"
1/2" x 1/4" FILLET WELD
32" TRUSS
D

7-C MINIMUM 23K BRIDGING TRUSS CONNECTION (PANEL JOINT)

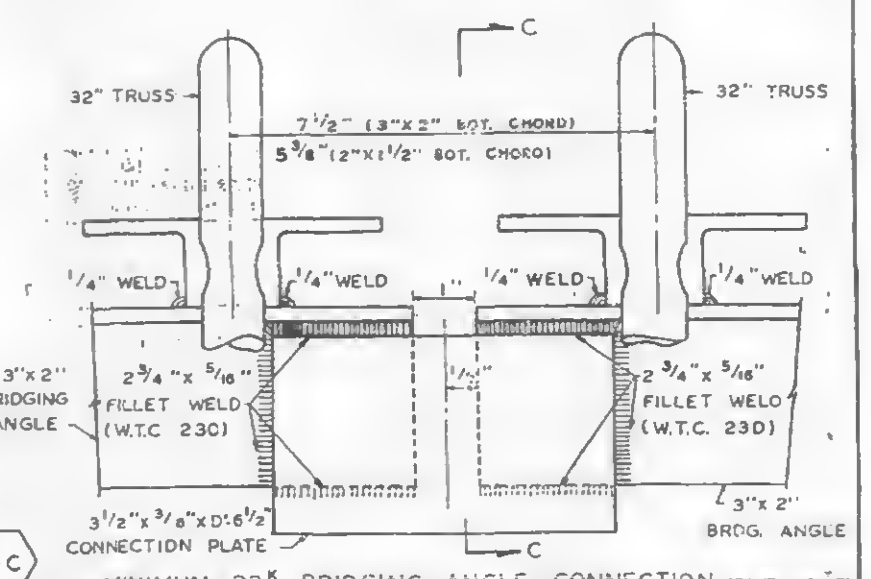


DETAIL "A"


32" TRUSS
2" x 1/4" FILLET WELD
SEE DETAIL "A"
MIN. 5/16
5/16" WELD + GAP (W.T.C. 230)
3" x 2" x 1/4" BRIDGING ANGLE
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE
5/16" WELD (W.T.C. 230)

SECTION C - C

SKILLING · HELLE · CHRISTIANSEN · ROBERTSON
Structural & Civil Engineers
6/3/68 WAB


C
32" TRUSS
32" TRUSS
7 1/2" (3" x 2" BOT. CHORD)
5 3/8" (2" x 1 1/2" BOT. CHORD)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
3" x 2" BRIDGING ANGLE
2 3/4" x 5/16" FILLET WELD (W.T.C 230)
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
3" x 2" BRDG. ANGLE
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE
C

2-C MINIMUM 23K BRIDGING ANGLE CONNECTION (PANEL JOINT)

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1.
4. ALL PLATE & Φ Splice Bars to be ASTM A36

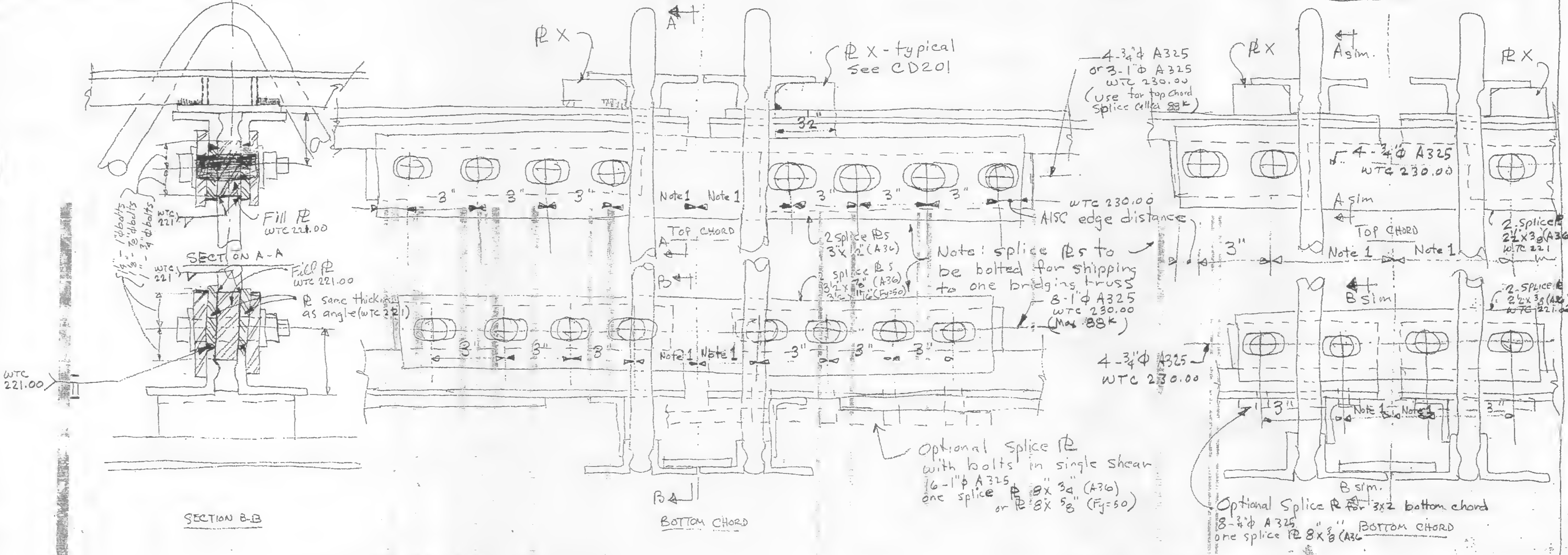
REF. DRWG.
7-AB4-15 5-17-68
7-AB4-16 5-17-68

NO.	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-C, 2-C, 4-C, 5-C & 7-C

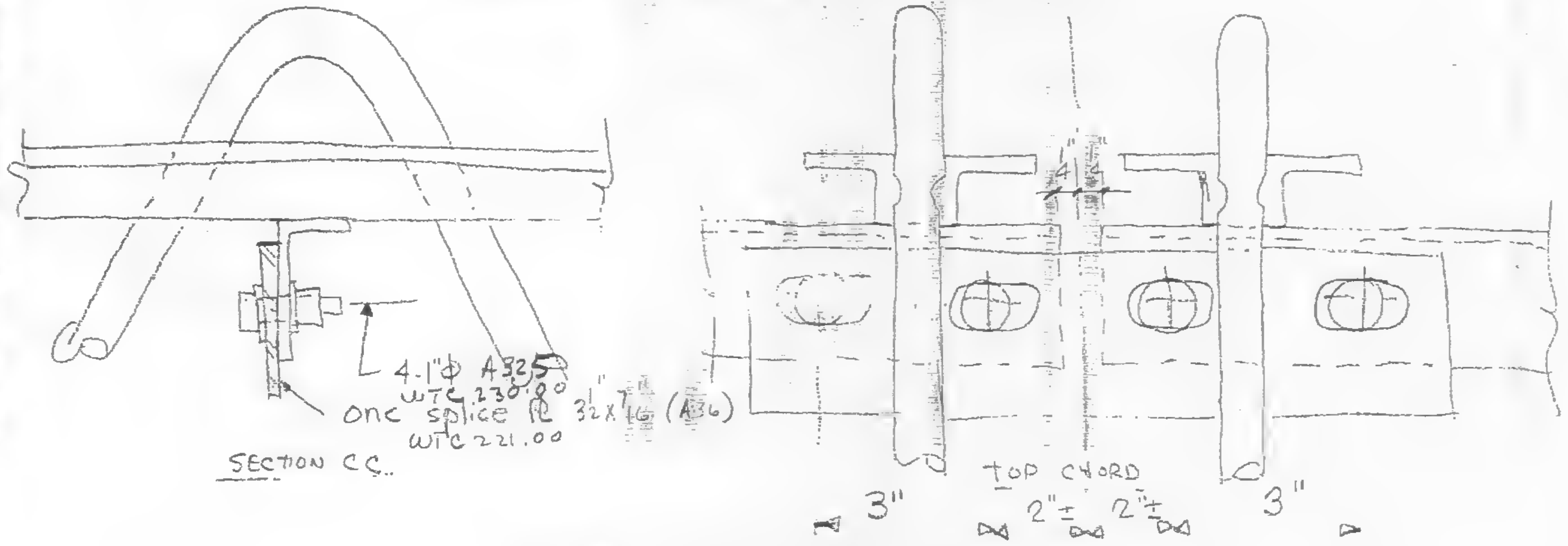
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE.
DRAWN BY: LWH DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M.CHUBA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY: A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 201



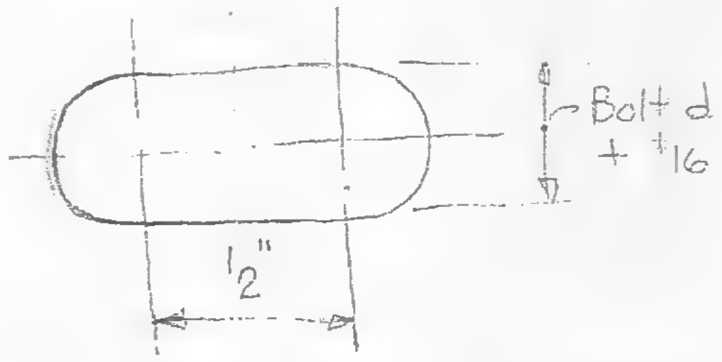
BRIDGING TRUSS CONNECTION - CORNER PANELS

BRIDGING TRUSS CONNECTION

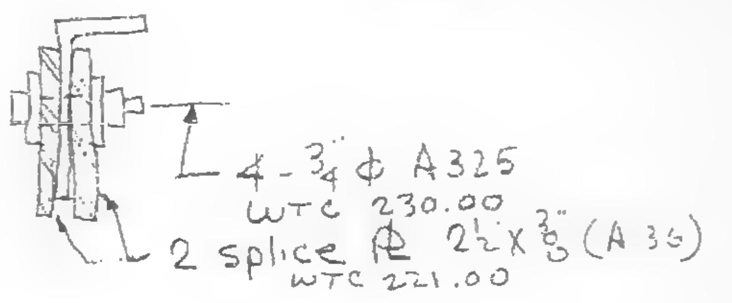
Note 1: This dim. to be established for bolts to clear bridging web members and for impact wrench to clear C32T web members.



BRIDGING ANGLE CONNECTION



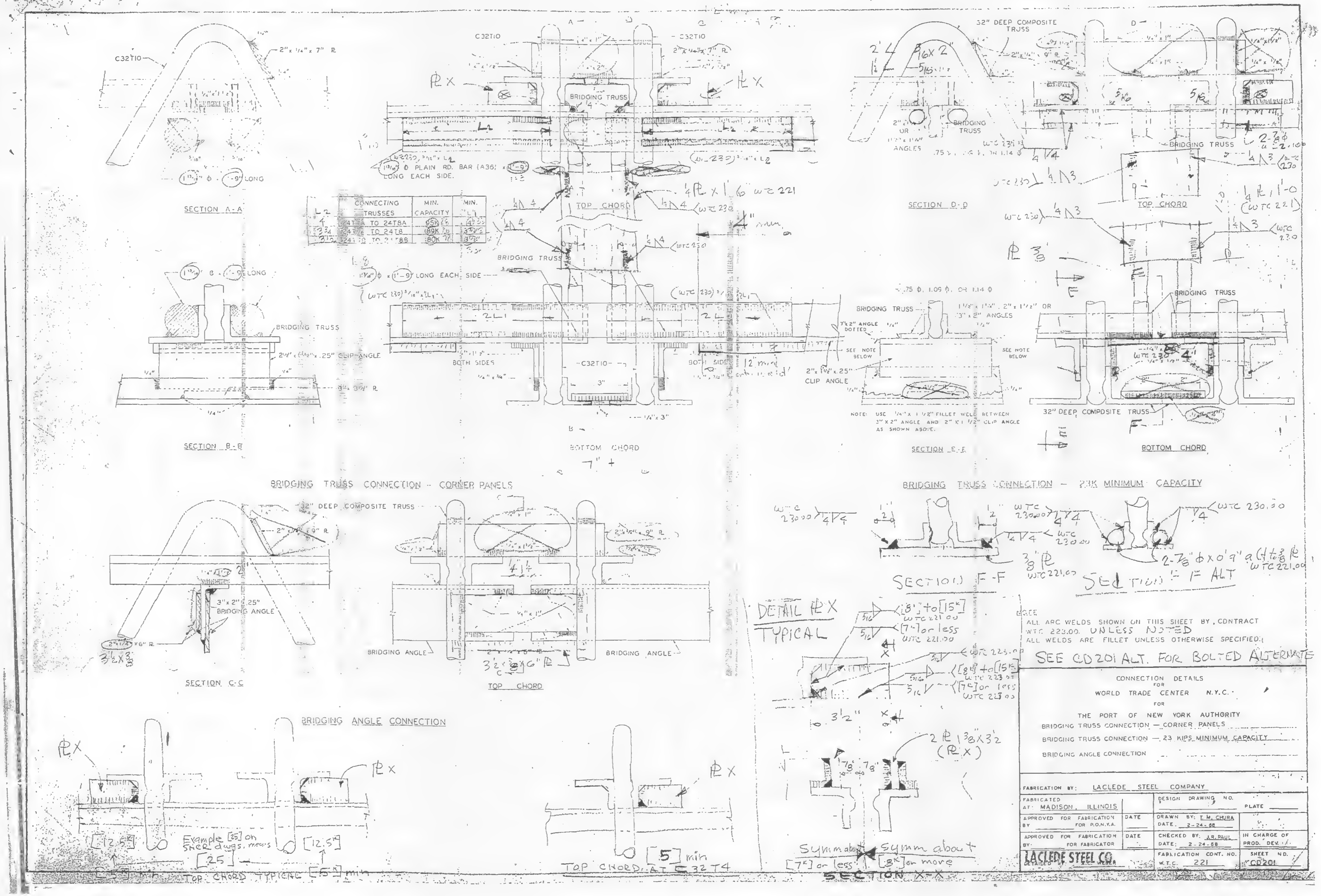
TYPICAL SPLICE PLATE HOLE



SECTION C-C ALT.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FABRICATION CONT. NO.	SHEET NO.
WTC 221	CD201 ALT.


SECTION A-A
C32T10
2" x 1/4" x 7" R
1 13/16" ϕ x 1'-9" LONG
SECTION B-B
1 13/16" ϕ x 1'-9" LONG
BRIDGING TRUSS
2 1/2" x 1 1/2" x .25" CLIP ANGLE
3/4" x 3/4" R
TOP CHORD
BOTTOM CHORD
C32T10
BRIDGING TRUSS
℄X
1 13/16" ϕ PLAIN RD. BAR (A36) x 1'-9" LONG EACH SIDE.
1 13/16" ϕ x 1'-9" LONG EACH SIDE
BOTH SIDES
1/4 ℄ x 1'6" WTC 221
4" min
BRIDGING TRUSS CONNECTION - CORNER PANELS
SECTION D-D
32" DEEP COMPOSITE TRUSS
2" OR 1 1/2" x 1 1/4" ANGLES
.75 ϕ, 1.09 ϕ, OR 1.14 ϕ
BRIDGING TRUSS
1 1/2" x 1 1/4", 2" x 1 1/2" OR 3" x 2" ANGLES
3" x 2" ANGLE DOTTED
SEE NOTE BELOW
2" x 1 1/2" x .25" CLIP ANGLE
NOTE: USE 1/4" x 1 1/2" FILLET WELD BETWEEN 3" x 2" ANGLE AND 2" x 1 1/2" CLIP ANGLE AS SHOWN ABOVE.
SECTION E-E
TOP CHORD
BOTTOM CHORD
32" DEEP COMPOSITE TRUSS
BRIDGING TRUSS CONNECTION - 23K MINIMUM CAPACITY
SECTION C-C
32" DEEP COMPOSITE TRUSS
3" x 2" x .25" BRIDGING ANGLE
3 1/2 x 3/8
TOP CHORD
BRIDGING ANGLE
3 1/2 x 3/8 x 6" ℄
SECTION F-F
3/8 ℄ WTC 221.00
SECTION F ALT
2-7/8" ϕ x 0'9" a(4) to 3/8 ℄ WTC 221.00
DETAIL ℄X TYPICAL
2 ℄ 1 3/8 x 3 1/2 (℄X)
SECTION X-X
Symm about [7k] or less
Symm about [8k] or more
BRIDGING ANGLE CONNECTION
Example [25] on SHOP dwgs. means [25]
[12.5k]
TOP CHORD TYPICAL [5k] min
TOP CHORD AT C32T4 [5] min

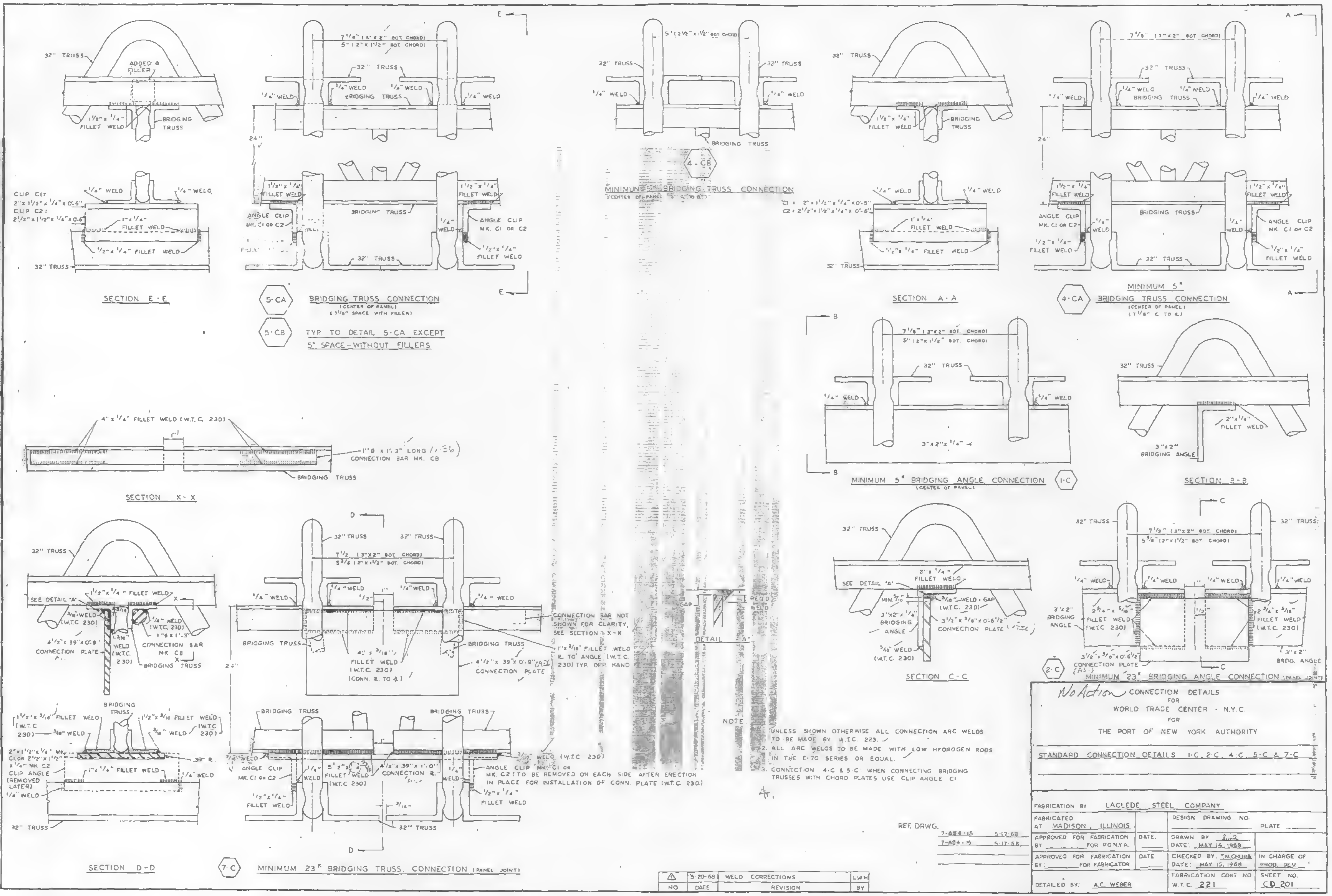
L2	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "L1"
4	24T7A TO 24T8A	95K	4"
3 3/4	24T7 TO 24T8	89K	3 1/2"
3 1/2	24T2 TO 24T8S	80K	3 1/2"

NOTE:
ALL ARC WELDS SHOWN ON THIS SHEET BY CONTRACT WTC 223.00. UNLESS NOTED
ALL WELDS ARE FILLET UNLESS OTHERWISE SPECIFIED.

SEE CD201 ALT. FOR BOLTED ALTERNATE

CONNECTION DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY
BRIDGING TRUSS CONNECTION — CORNER PANELS
BRIDGING TRUSS CONNECTION — 23 KIPS MINIMUM CAPACITY
BRIDGING ANGLE CONNECTION

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY: T. M. CHURA DATE: 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: 2-24-68	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD201


SECTION E-E
32" TRUSS
ADDED Ⓡ FILLER
1/2" x 1/4" FILLET WELD
BRIDGING TRUSS
CLIP C1: 2" x 1 1/2" x 1/4" x 0'-6"
CLIP C2: 2 1/2" x 1 1/2" x 1/4" x 0'-6"
1/4" WELD
1" x 1/4" FILLET WELD
1/2" x 1/4" FILLET WELD
5-CA BRIDGING TRUSS CONNECTION (CENTER OF PANEL) (7 1/8" SPACE WITH FILLER)
5-CB TYP. TO DETAIL 5-CA EXCEPT 5" SPACE - WITHOUT FILLERS
7 1/8" (3" x 2" BOT. CHORD)
5" (2" x 1 1/2" BOT. CHORD)
ANGLE CLIP MK. C1 OR C2
24"
4-CB MINIMUM 5K BRIDGING TRUSS CONNECTION (CENTER OF PANEL 5" C. TO C.)
5" (2 1/2" x 1 1/2" BOT. CHORD)
SECTION A-A
4-CA MINIMUM 5K BRIDGING TRUSS CONNECTION (CENTER OF PANEL) (7 1/8" C. TO C.)
SECTION X-X
4" x 1/4" FILLET WELD (W.T.C. 230)
1" Ø x 1'-3" LONG (1-36) CONNECTION BAR MK. CB
MINIMUM 5K BRIDGING ANGLE CONNECTION (CENTER OF PANEL) 1-C
3" x 2" x 1/4"
SECTION B-B
2" x 1/4" FILLET WELD
3" x 2" BRIDGING ANGLE
SECTION D-D
SEE DETAIL 'A'
4 1/2" x 39" x 0'-9" CONNECTION PLATE
1" Ø x 1'-3" CONNECTION BAR MK CB
2" x 1 1/2" x 1/4" MK. C1 OR 2 1/2" x 1 1/2" x 1/4" MK. C2 CLIP ANGLE (REMOVED LATER)
7-C MINIMUM 23K BRIDGING TRUSS CONNECTION (PANEL JOINT)
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
1" x 3/16" FILLET WELD PL. TO ANGLE (W.T.C. 230) TYP. OPP. HAND
4" x 3/16" FILLET WELD (W.T.C. 230) (CONN. PL. TO Ⓛ)
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230)
DETAIL 'A'
GAP
SECTION C-C
3/16" WELD + GAP (W.T.C. 230)
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE
5/16" WELD (W.T.C. 230)
2-C MINIMUM 23K BRIDGING ANGLE CONNECTION (PANEL JOINT)
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
3" x 2" BRDG. ANGLE

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1

4.

REF. DRWG.

7-A84-15	5-17-68
7-A84-16	5-17-68

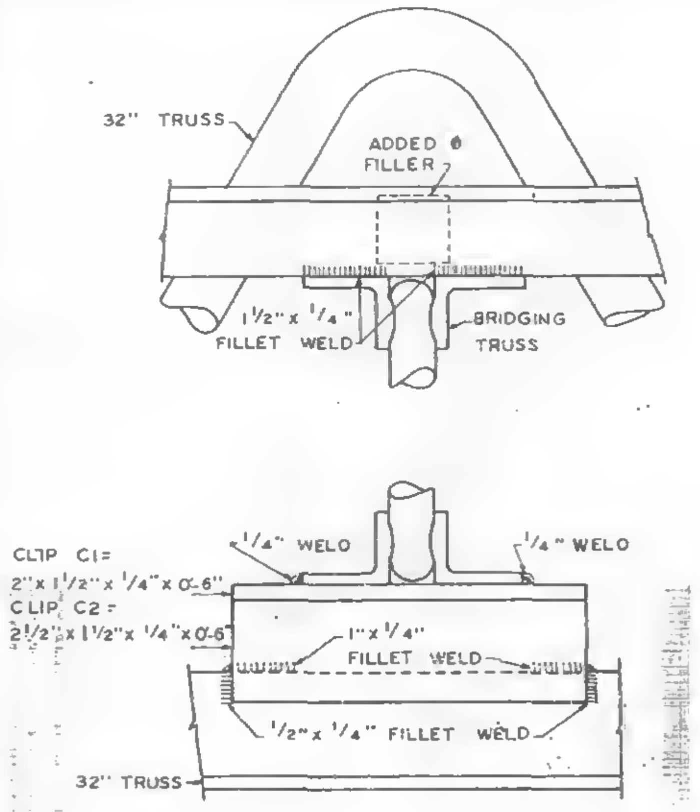
NO.	DATE	REVISION	BY
△	5-20-68	WELD CORRECTIONS	L.W.H.

No Action CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

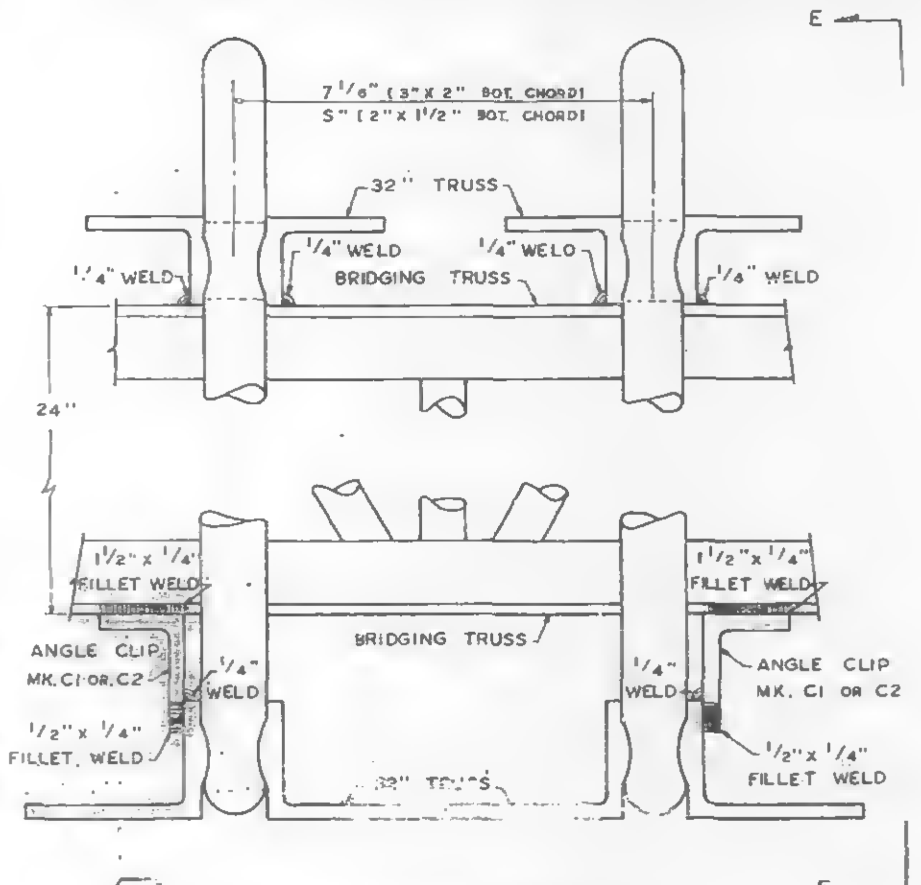
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-C, 5-C & 7-C

FABRICATION BY LACLEDE STEEL COMPANY

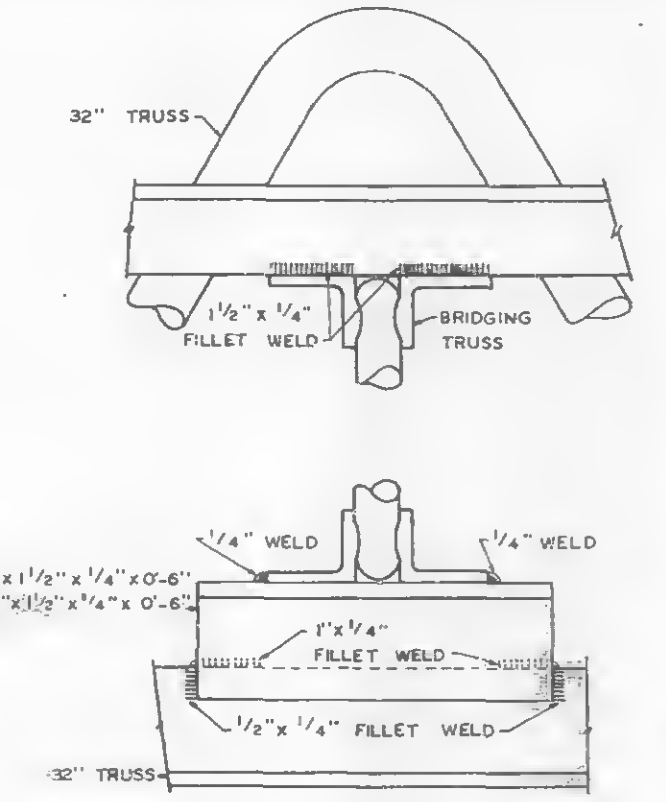
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE.	DRAWN BY R.R. DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY: ______ FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 201



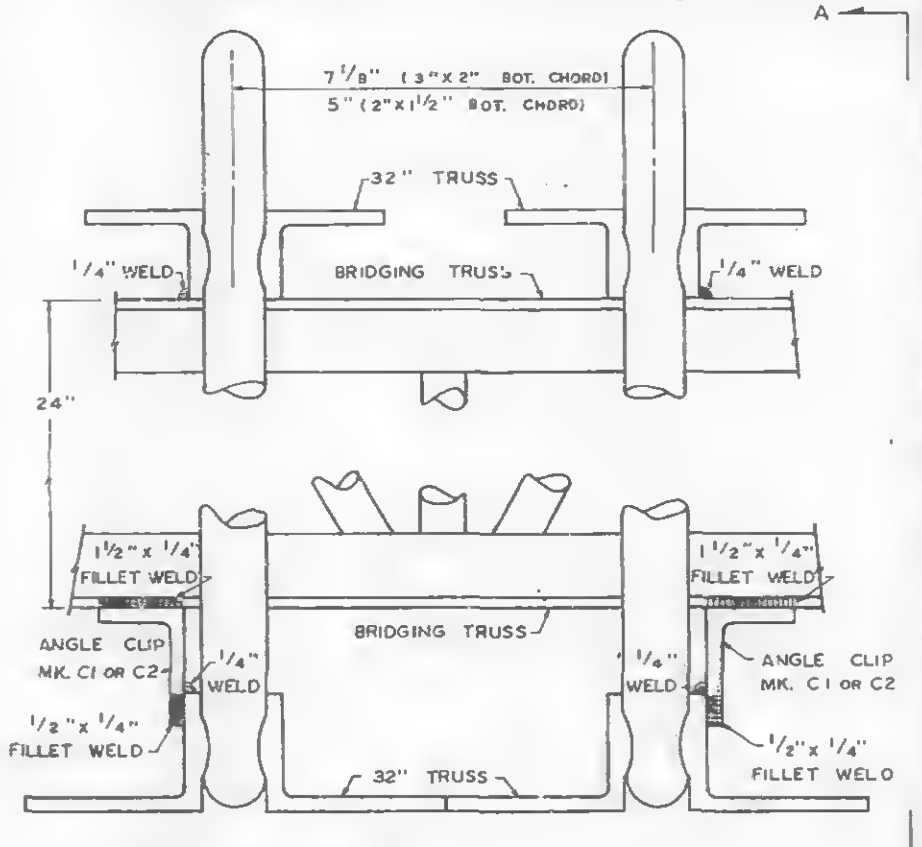
SECTION E-E



5-C BRIDGING TRUSS CONNECTION (CENTER OF PANEL)

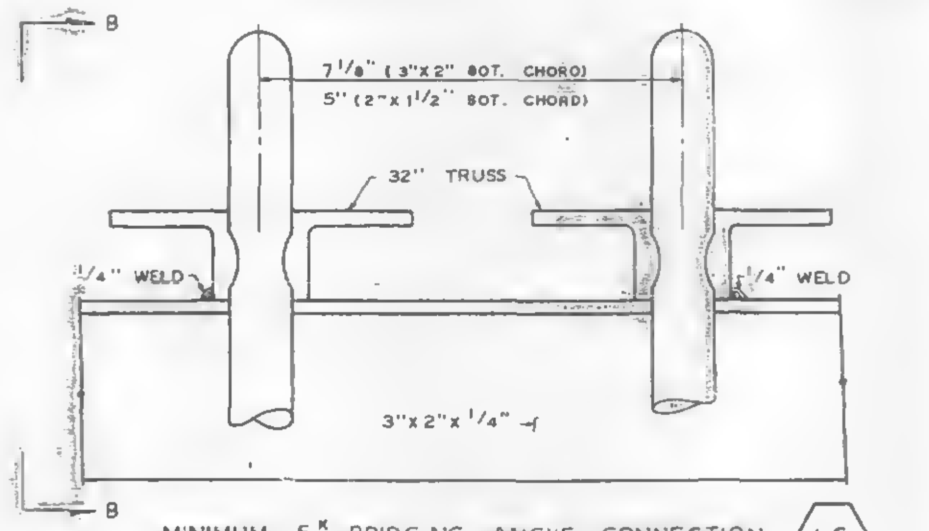


SECTION A-A

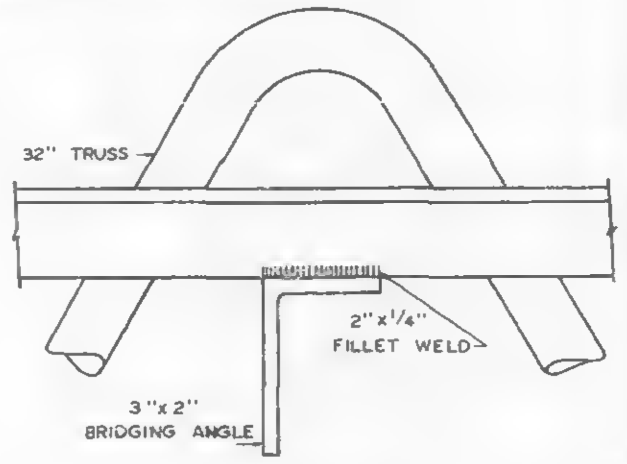


MINIMUM 5^K

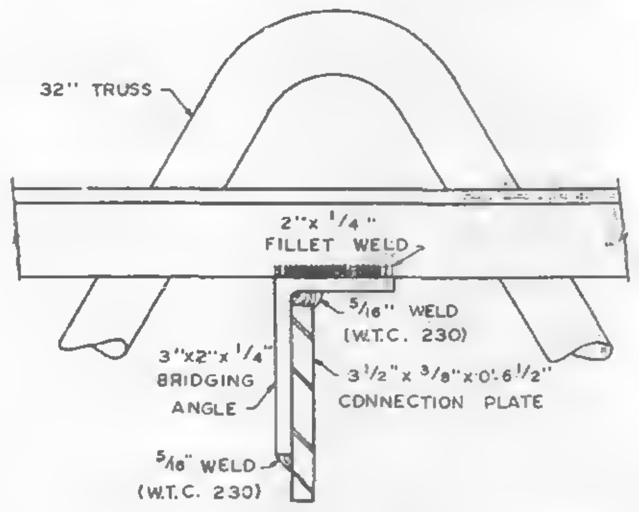
4-C BRIDGING TRUSS CONNECTION (CENTER OF PANEL)



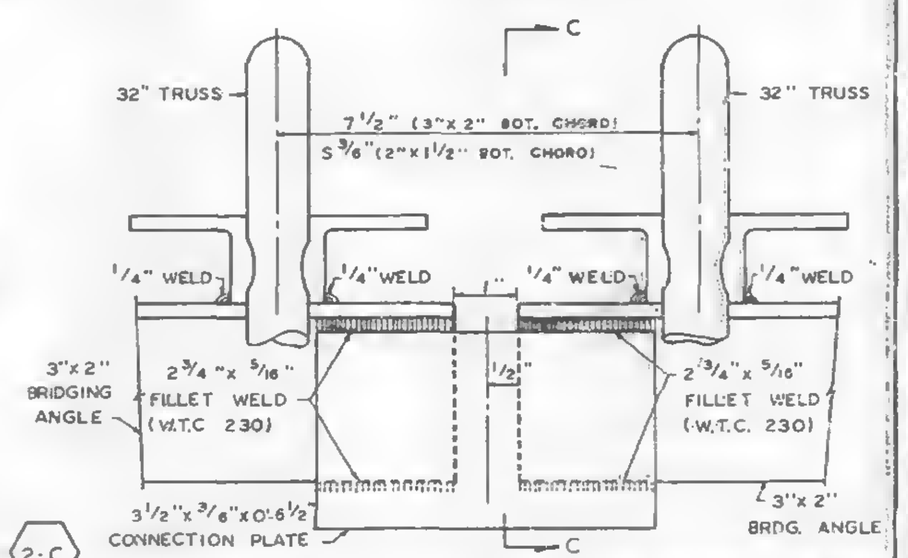
MINIMUM 5^K BRIDGING ANGLE CONNECTION (CENTER OF PANEL) 1-C



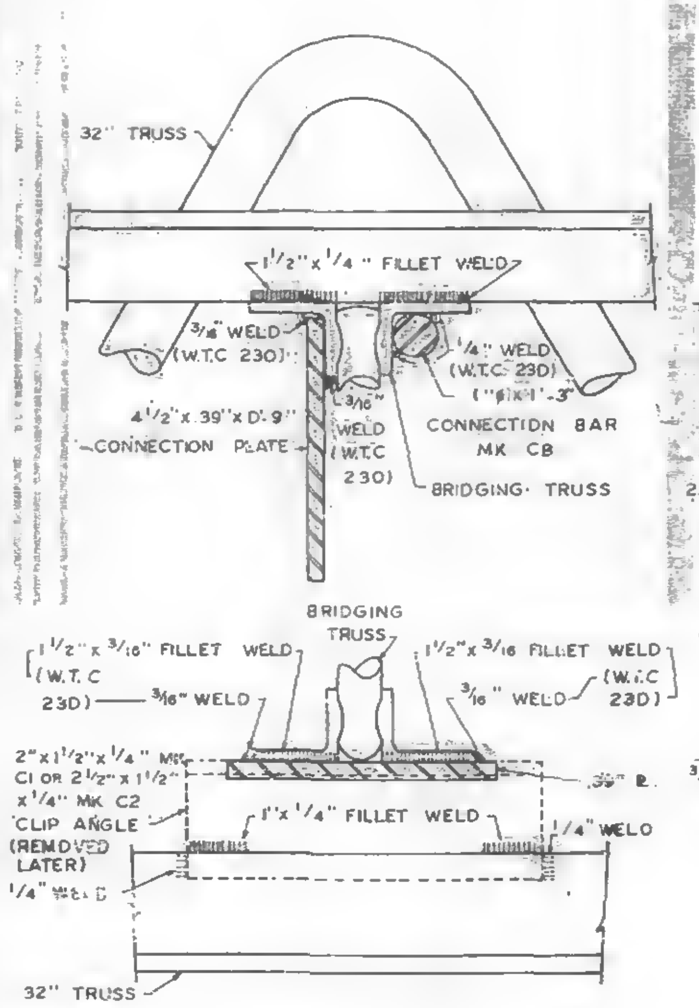
SECTION B-B



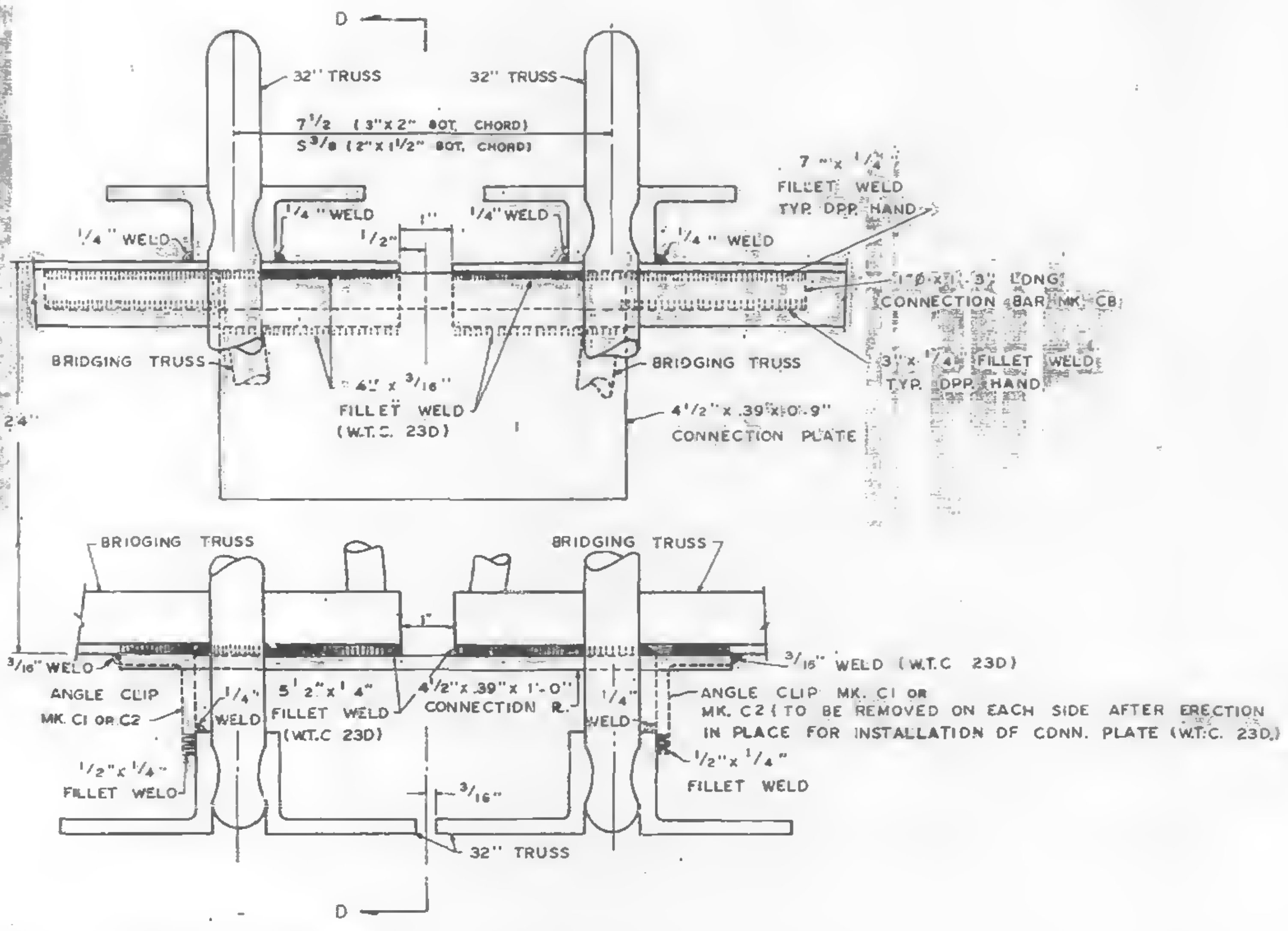
SECTION C-C


C
32" TRUSS
32" TRUSS
7 1/2" (3" x 2" BOT. CHORD)
5 3/8" (2" x 1 1/2" BOT. CHORD)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
3" x 2" BRIDGING ANGLE
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
1/2"
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE
3" x 2" BRDG. ANGLE
C

2-C MINIMUM 23^K BRIDGING ANGLE CONNECTION (PANEL JOINT)


32" TRUSS
1 1/2" x 1/4" FILLET WELD
3/8" WELD (W.T.C. 230)
1/4" WELD (W.T.C. 230)
("8" x 1'-3")
4 1/2" x 39" x 0'-9" CONNECTION PLATE
3/16" WELD (W.T.C. 230)
CONNECTION BAR MK. CB
BRIDGING TRUSS
BRIDGING TRUSS
1 1/2" x 3/16" FILLET WELD (W.T.C 230)
1 1/2" x 3/16" FILLET WELD (W.T.C 230)
3/16" WELD
3/16" WELD
2" x 1 1/2" x 1/4" MK. C1 OR 2 1/2" x 1 1/2" x 1/4" MK. C2 CLIP ANGLE (REMOVED LATER)
1" x 1/4" FILLET WELD
1/4" WELD
1/4" WELD
32" TRUSS

SECTION D-D


D
32" TRUSS
32" TRUSS
7 1/2 (3" x 2" BOT. CHORD)
5 3/8 (2" x 1 1/2" BOT. CHORD)
7" x 1/4" FILLET WELD TYP. OPP. HAND
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1/2"
1" x 1 1/2" LONG CONNECTION BAR MK. CB
BRIDGING TRUSS
BRIDGING TRUSS
3" x 1/4" FILLET WELD TYP. OPP. HAND
4" x 3/16" FILLET WELD (W.T.C. 230)
4 1/2" x .39" x 0'-9" CONNECTION PLATE
24"
BRIDGING TRUSS
BRIDGING TRUSS
3/16" WELD
3/16" WELD (W.T.C. 230)
ANGLE CLIP MK. C1 OR C2
1/4" WELD
5 1/2" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2" x .39" x 1'-0" CONNECTION P.
1/4" WELD
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C. 230)
1/2" x 1/4" FILLET WELD
1/2" x 1/4" FILLET WELD
3/16"
32" TRUSS
D

7-C MINIMUM 23^K BRIDGING TRUSS CONNECTION (PANEL JOINT)

VOID

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1.

REF. DRWG.

7-A84-15	5-6-68
7-A84-16	5-6-68

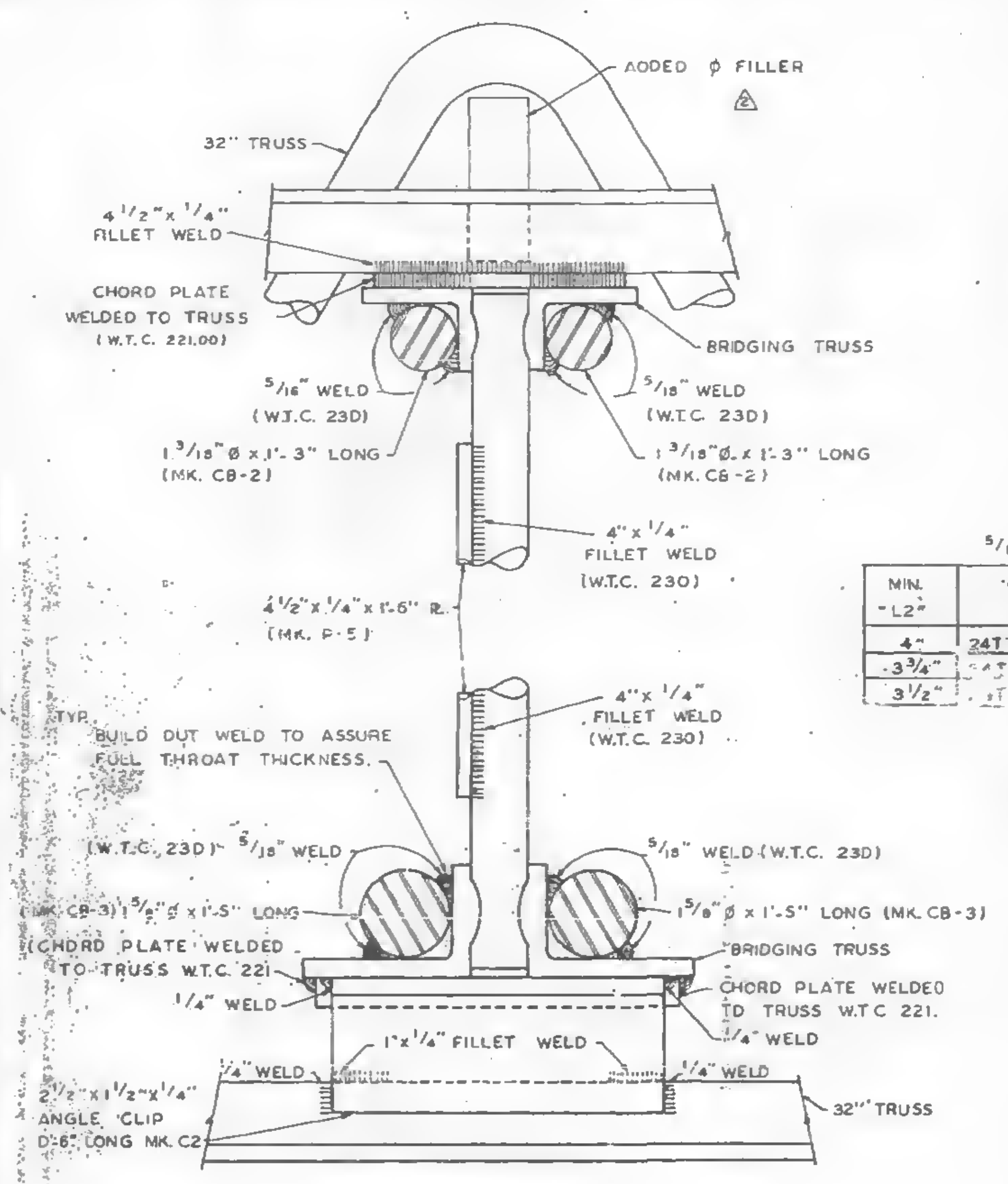
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

5/17/68

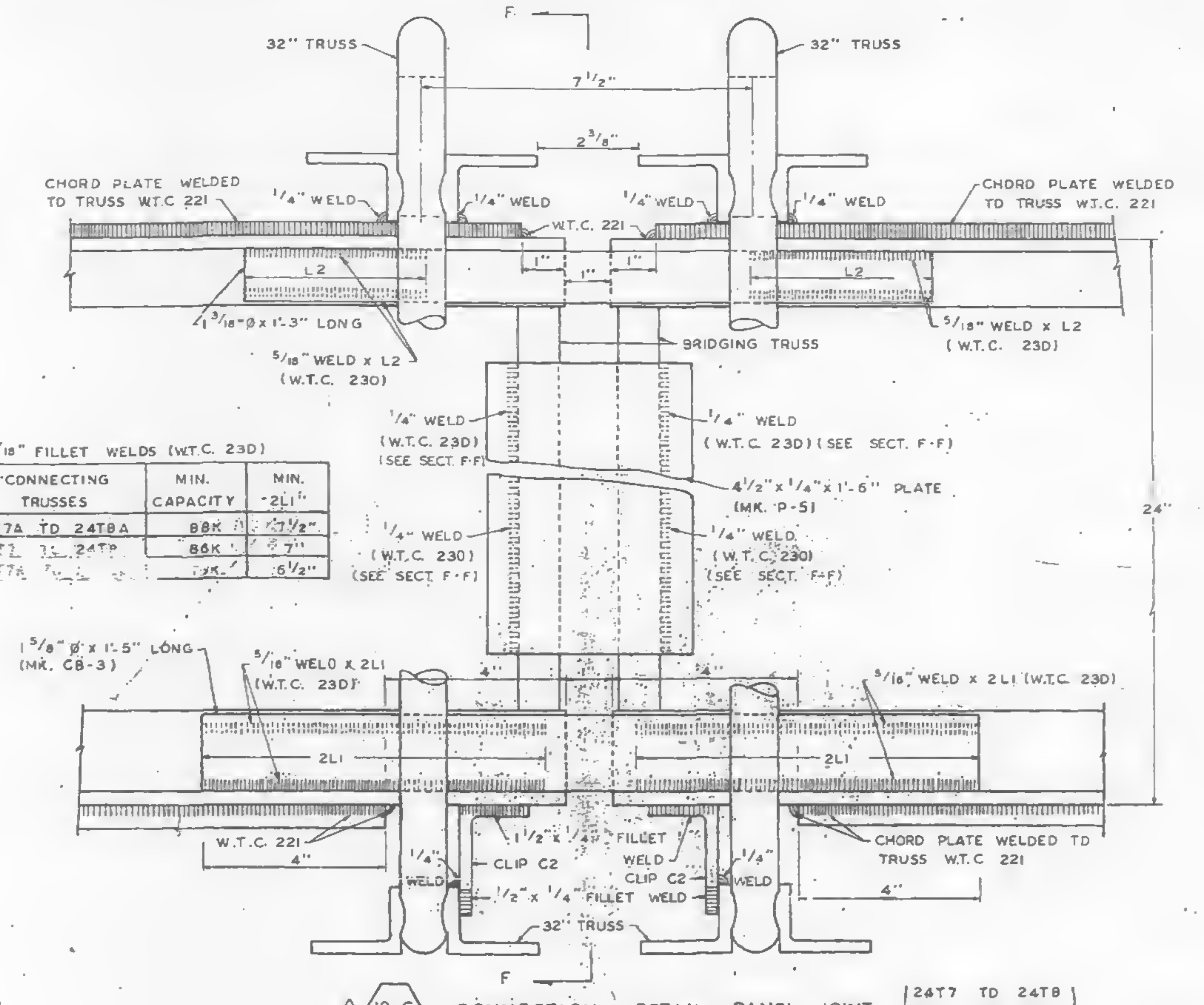
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-C, 5-C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY. ______ FOR P.D.N.Y.A.	DATE.	DRAWN BY: Sub DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY: ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD-201


ADDED ø FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.DD)
BRIDGING TRUSS
5/16" WELD (W.T.C. 23D)
5/16" WELD (W.T.C. 23D)
1 3/16" ø x 1'-3" LONG (MK. CB-2)
1 3/16" ø x 1'-3" LONG (MK. CB-2)
4" x 1/4" FILLET WELD (W.T.C. 23D)
4 1/2" x 1/4" x 1'-6" (MK. P-5)
4" x 1/4" FILLET WELD (W.T.C. 23D)
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 23D) 5/16" WELD
5/16" WELD (W.T.C. 23D)
(MK. CB-3) 1 5/8" ø x 1'-5" LONG
1 5/8" ø x 1'-5" LONG (MK. CB-3)
CHORD PLATE WELDED TO TRUSS W.T.C. 221
BRIDGING TRUSS
1/4" WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221.
1/4" WELD
1" x 1/4" FILLET WELD
1/4" WELD
1/4" WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP D'-6" LONG MK. C2
32" TRUSS

SECTION F-F △

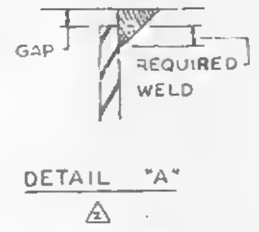

F
32" TRUSS
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
W.T.C. 221
1"
1"
1"
L2
L2
1 3/16" ø x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 23D)
BRIDGING TRUSS
5/16" WELD x L2 (W.T.C. 23D)
1/4" WELD (W.T.C. 23D) (SEE SECT. F-F)
1/4" WELD (W.T.C. 23D) (SEE SECT. F-F)
4 1/2" x 1/4" x 1'-6" PLATE (MK. P-5)
1/4" WELD (W.T.C. 23D) (SEE SECT. F-F)
1/4" WELD (W.T.C. 23D) (SEE SECT. F-F)
24"
1 5/8" ø x 1'-5" LONG (MK. CB-3)
5/16" WELD x 2L1 (W.T.C. 23D)
5/16" WELD x 2L1 (W.T.C. 23D)
4"
2L1
2L1
W.T.C. 221
4"
1/4" WELD
CLIP C2
1 1/2" x 1/4" FILLET WELD
FILLET WELD CLIP C2
1/2" x 1/4" FILLET WELD
1/4" WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
4"
32" TRUSS
F

5/16" FILLET WELDS (W.T.C. 23D)

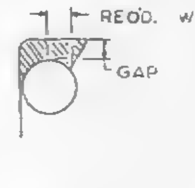
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	[illegible] 24T8	86K	7"
3 1/2"	[illegible]	[illegible]K	6 1/2"

△ 10-C CONNECTION DETAIL PANEL JOINT

24T7 TO 24T8
24T7A TO 24T8A
24T7B TO 24T8B



DETAIL "A" △



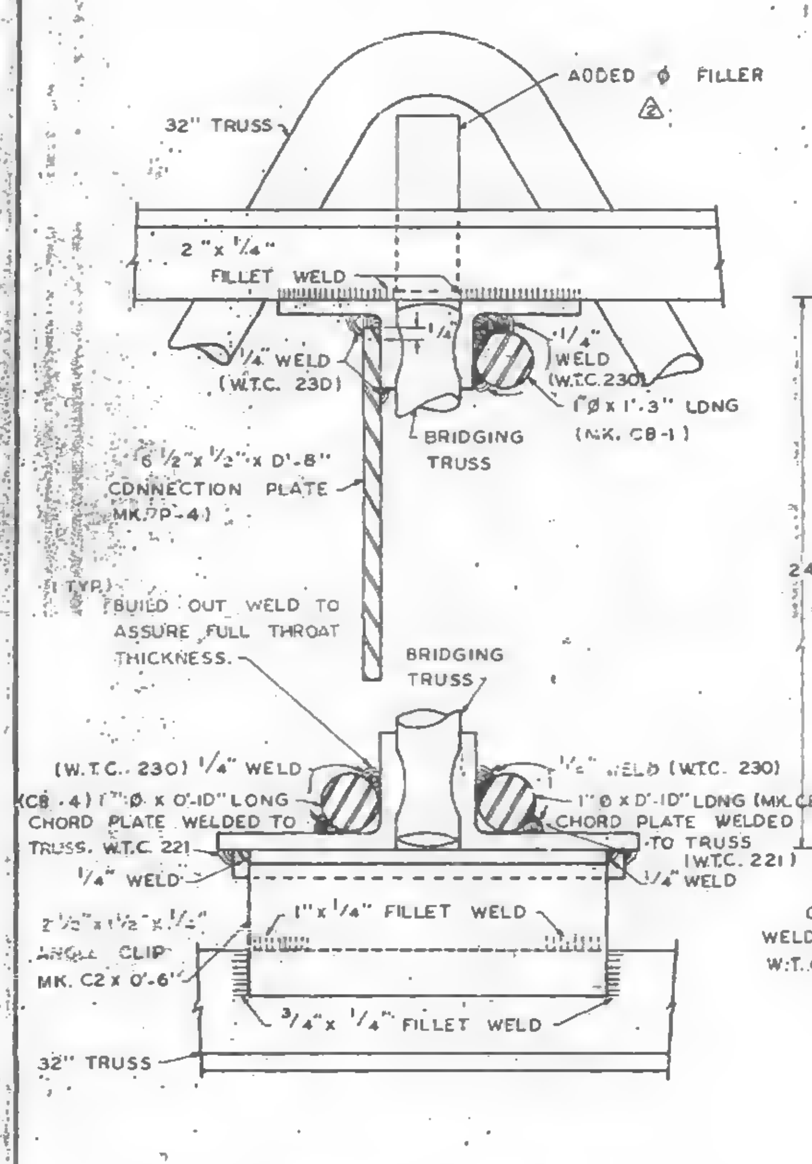
DETAIL "B" △

LIST OF FLOOR CONNECTION IDENTIFICATIONS

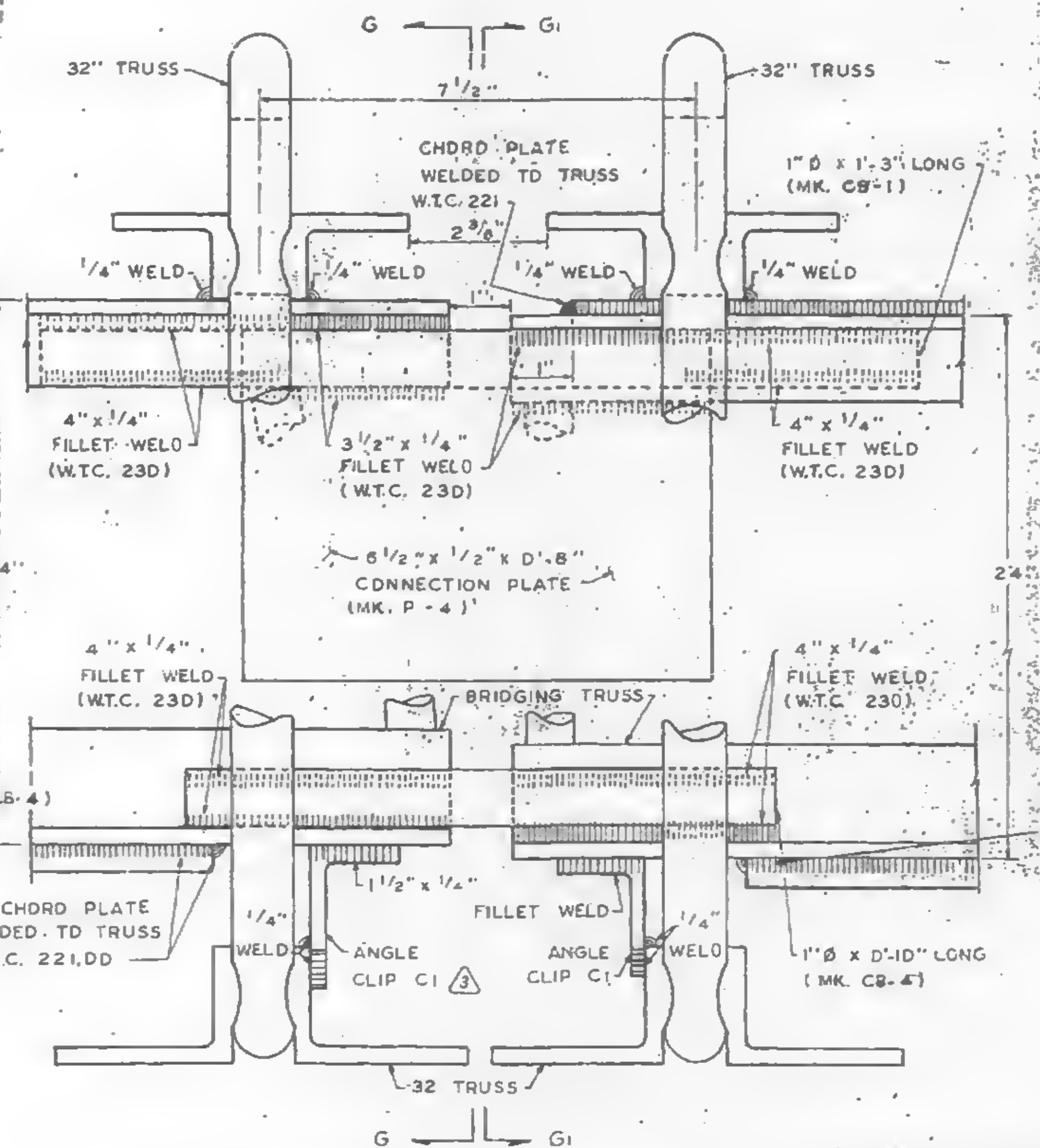
Connection Designation	Description	Drawing No.
1C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Joints	CD 201
2C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 13C, 14C & 15C)	CD 201
△ 3C	Connection of 3" x 2" x 1/4" Bridging Angles with C32T4	CD 204
4CA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 201
4CB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels H, HR, J, K, KR, M and MR)	CD 201
△ 5C	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, DR, E, ER, F, FR, C and GR except 6-C Connections in Panel F and FR)	CD 201
△ 6C	Connection of 24T7, 24T7A, 24T7B and 24T14 to the C32T4	CD 201
7C	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joiots Except Special Cases 8C, 10C &11C. 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 2[illegible]
△ 9C	Connections of the following Bridging Trusses at Panel Joints 24T9 to 24T11A 24T9A to 24T11A	CD 2[illegible]
10C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7 24T8A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10, 24T10A or 24T10B Bridging at Panel Joints	CD 204
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T3 Trusses	CD 209
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 207
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 205
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 208
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 206
△ 18C	Connection of 3" x 2" x 1/4" Bridging Angle with the double C32T3 trusses in Panel E & ER at second line of bridging from core end	CD 204
△ 19C	Connection of 3" x 2" x 1/4" Bridging Angle with the double C32T2 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at second line of bridging from core end	CD 204

REF. DRWG.

7-A84-18	5-6-68
7-A84-18.1	5-8-68

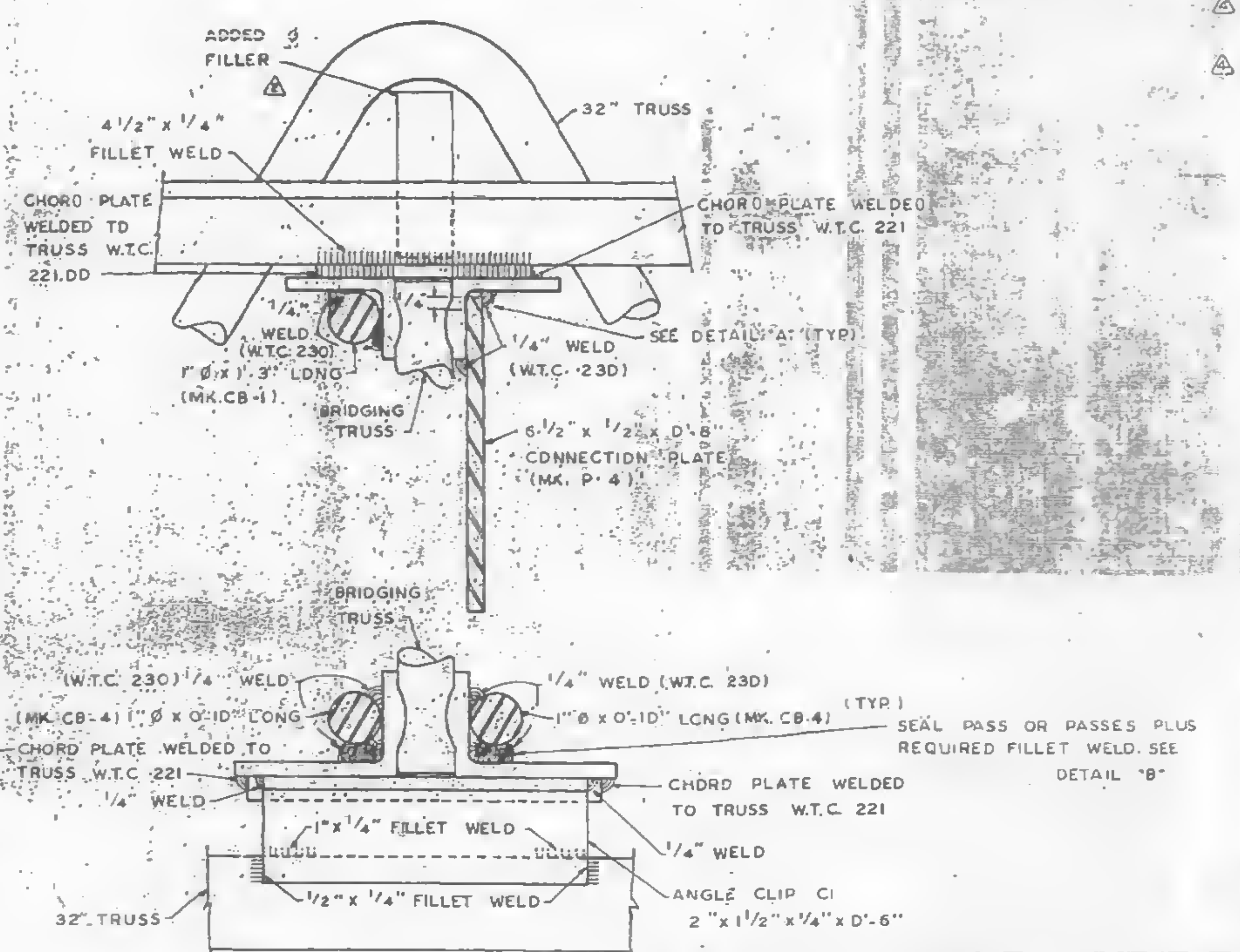

ADDED ø FILLER
32" TRUSS
2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 23D)
1/4" WELD (W.T.C. 23D)
1" ø x 1'-3" LONG (MK. CB-1)
BRIDGING TRUSS
6 1/2" x 1/2" x D'-8" CONNECTION PLATE (MK. P-4)
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
24"
BRIDGING TRUSS
(W.T.C. 23D) 1/4" WELD
1/4" WELD (W.T.C. 23D)
(MK. CB-4) 1" ø x D'-1D" LONG
1" ø x D'-1D" LONG (MK. CB-4)
CHORD PLATE WELDED TO TRUSS W.T.C. 221
CHORD PLATE WELDED TO TRUSS (W.T.C. 221)
1/4" WELD
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1 1/2" x 1/2" ANGLE CLIP MK. C2 x D'-6"
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G-G △


G
G1
32" TRUSS
32" TRUSS
7 1/2"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
2 3/8"
1" ø x 1'-3" LONG (MK. CB-1)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1"
4" x 1/4" FILLET WELD (W.T.C. 23D)
3 1/2" x 1/4" FILLET WELD (W.T.C. 23D)
4" x 1/4" FILLET WELD (W.T.C. 23D)
6 1/2" x 1/2" x D'-8" CONNECTION PLATE (MK. P-4)
24"
4" x 1/4" FILLET WELD (W.T.C. 23D)
BRIDGING TRUSS
4" x 1/4" FILLET WELD (W.T.C. 23D)
CHORD PLATE WELDED TO TRUSS W.T.C. 221.DD
1/4" WELD
1 1/2" x 1/4"
FILLET WELD
ANGLE CLIP C1
ANGLE CLIP C1
1/4" WELD
1" ø x D'-1D" LONG (MK. CB-4)
32 TRUSS
G
G1

△ 8-C CONNECTION DETAIL PANEL JOINT

24T8 TO 24T10
24T8A TO 24T10A
24T8B TO 24T10B


ADDED ø FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221.DD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 23D)
1" ø x 1'-3" LONG (MK. CB-1)
BRIDGING TRUSS
1/4" WELD (W.T.C. 23D)
SEE DETAIL "A" (TYP)
6 1/2" x 1/2" x D'-8" CONNECTION PLATE (MK. P-4)
24"
BRIDGING TRUSS
(W.T.C. 23D) 1/4" WELD
1/4" WELD (W.T.C. 23D)
(MK. CB-4) 1" ø x D'-1D" LONG
1" ø x D'-1D" LONG (MK. CB-4)
(TYP.) SEAL PASS OR PASSES PLUS REQUIRED FILLET WELD. SEE DETAIL "B"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1" x 1/4" FILLET WELD
1/4" WELD
1/2" x 1/4" FILLET WELD
ANGLE CLIP C1 2" x 1 1/2" x 1/4" x D'-6"
32" TRUSS

△ SECTION G1-G1

NOTE:

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. △ ALL PLATES & ø SPLICE BARS TO BE ASTM A36

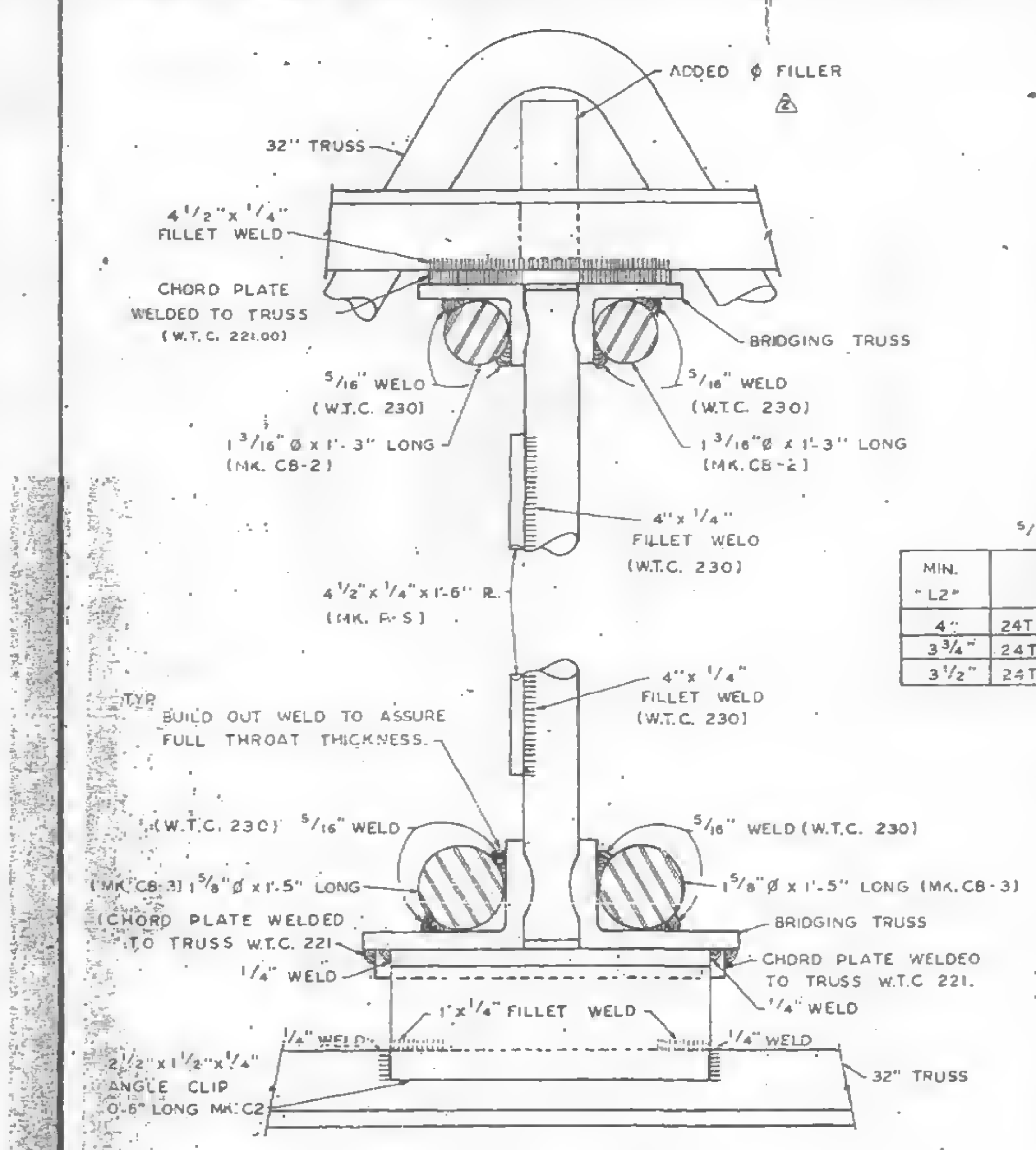
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

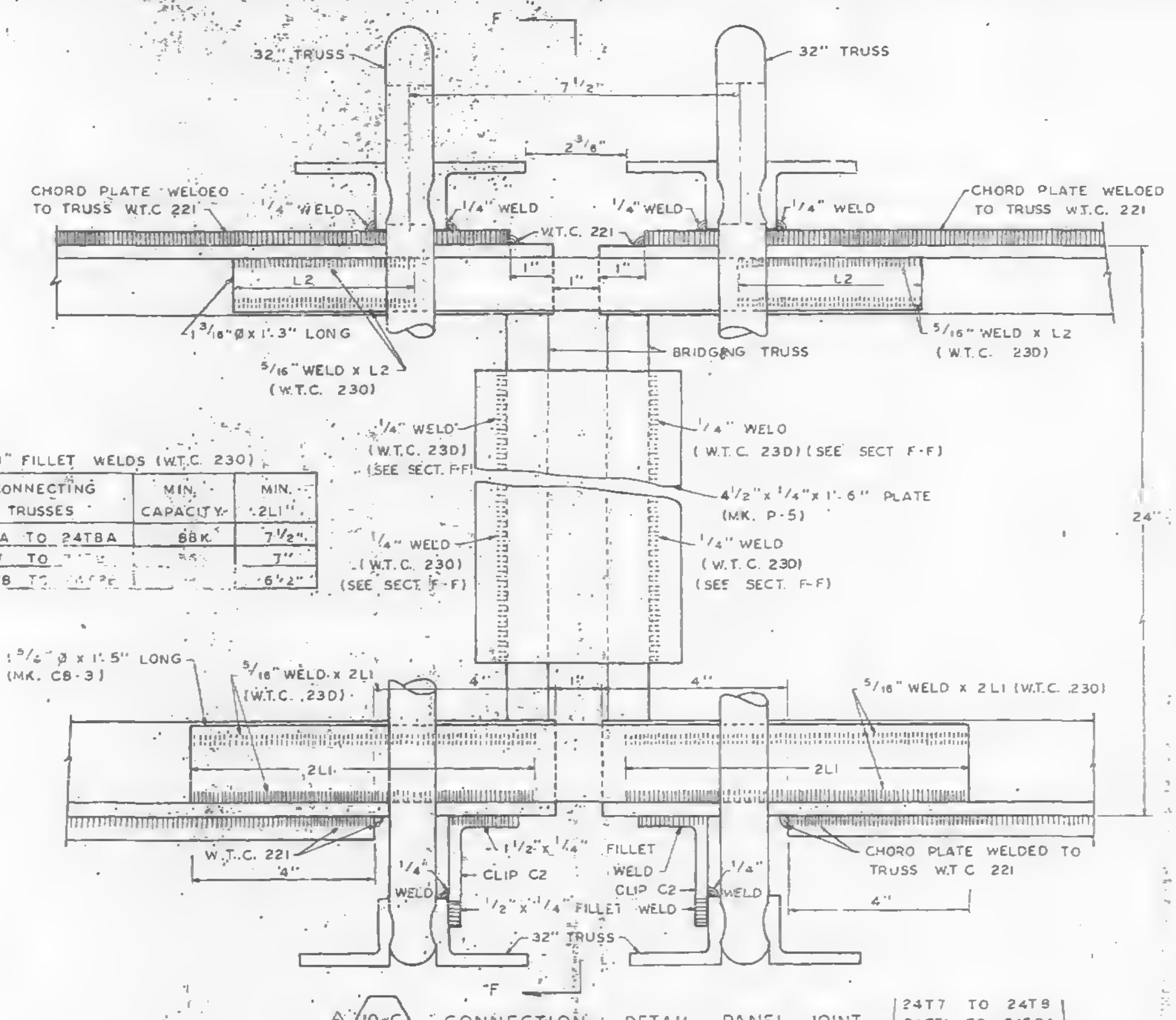
FABRICATION BY: LACLEDE STEEL COMPANY

NO.	DATE	REVISION	BY
△5	8-14-66	9C IN TABLE	T.M.C.
△4	7-29-68	3C, 5C, 6C, 18C & 19C IN TABLE	
△3	7-3-68	CLIP ANGLE	L.W.H.
△2	6-24-68	AS NOTED	L.W.H.
△1	5-20-68	WELD CORRECTIONS	L.W.H.

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A	DATE 8/29/68	DRAWN BY:	DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD 202


ADDED ø FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.00)
BRIDGING TRUSS
5/16" WELD (W.T.C. 230)
5/16" WELD (W.T.C. 230)
1 3/16" ø x 1'-3" LONG (MK. CB-2)
1 3/16" ø x 1'-3" LONG (MK. CB-2)
4" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2" x 1/4" x 1'-6" R. (MK. P-5)
4" x 1/4" FILLET WELD (W.T.C. 230)
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 230) 5/16" WELD
5/16" WELD (W.T.C. 230)
(MK. CB-3) 1 5/8" ø x 1'-5" LONG
1 5/8" ø x 1'-5" LONG (MK. CB-3)
CHORD PLATE WELDED TO TRUSS W.T.C. 221
BRIDGING TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
1/4" WELD
1/4" WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP 0'-6" LONG MK. C2
32" TRUSS

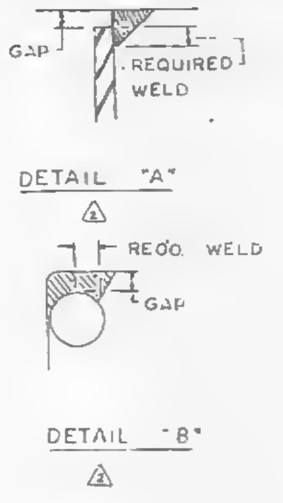
SECTION F-F △


F
32" TRUSS
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1/4" WELD
W.T.C. 221
1/4" WELD
1/4" WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1"
1"
1"
L2
L2
1 3/16" ø x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 230)
BRIDGING TRUSS
5/16" WELD x L2 (W.T.C. 230)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
4 1/2" x 1/4" x 1'-6" PLATE (MK. P-5)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
24"
1 5/8" ø x 1'-5" LONG (MK. CB-3)
5/16" WELD x 2L1 (W.T.C. 230)
5/16" WELD x 2L1 (W.T.C. 230)
4"
1"
4"
2L1
2L1
W.T.C. 221
4"
1/4" WELD
1 1/2" x 1/4" FILLET WELD
CLIP C2
1 1/2" x 1/4" FILLET WELD
WELD CLIP C2
1/4" WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
4"
32" TRUSS
F

5/16" FILLET WELDS (W.T.C. 230)

MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO [illegible]	[illegible]	7"
3 1/2"	24T7B TO [illegible]	[illegible]	6 1/2"

△ (10-C) CONNECTION DETAIL PANEL JOINT
24T7 TO 24T9
24T7A TO 24T9A
24T7B TO 24T8B



DETAIL "A" △

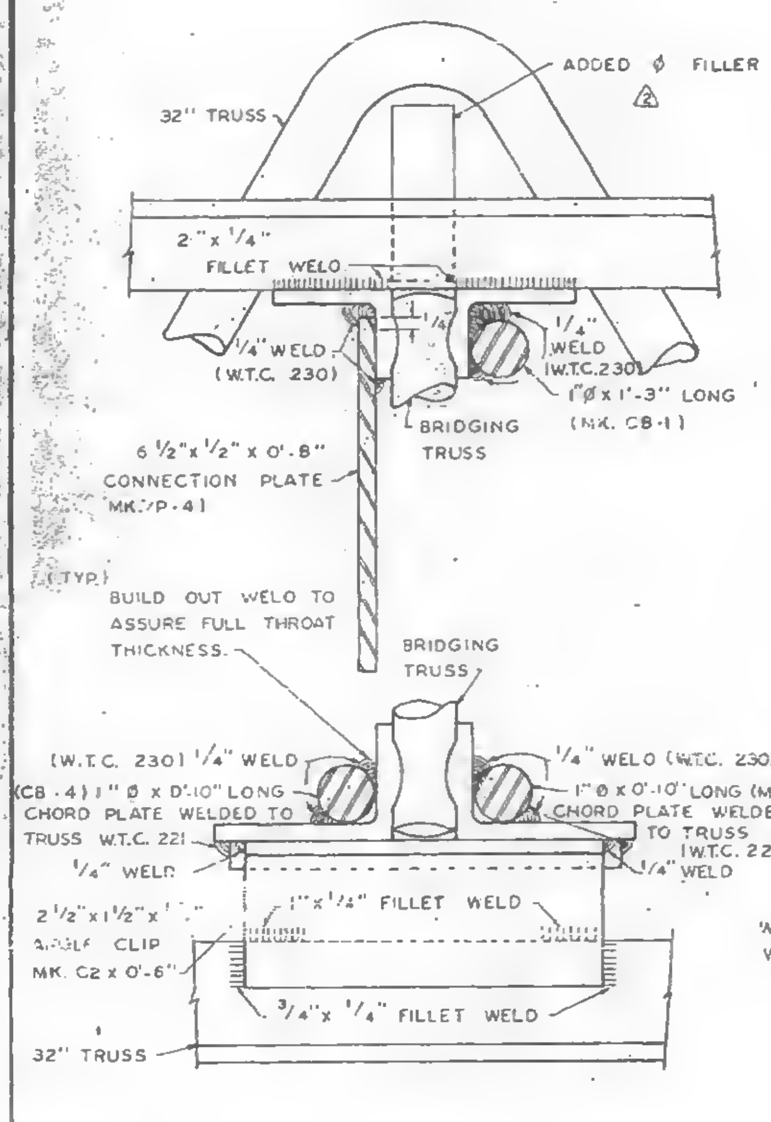
DETAIL "B" △

LIST OF FLOOR CONNECTION IDENTIFICATIONS

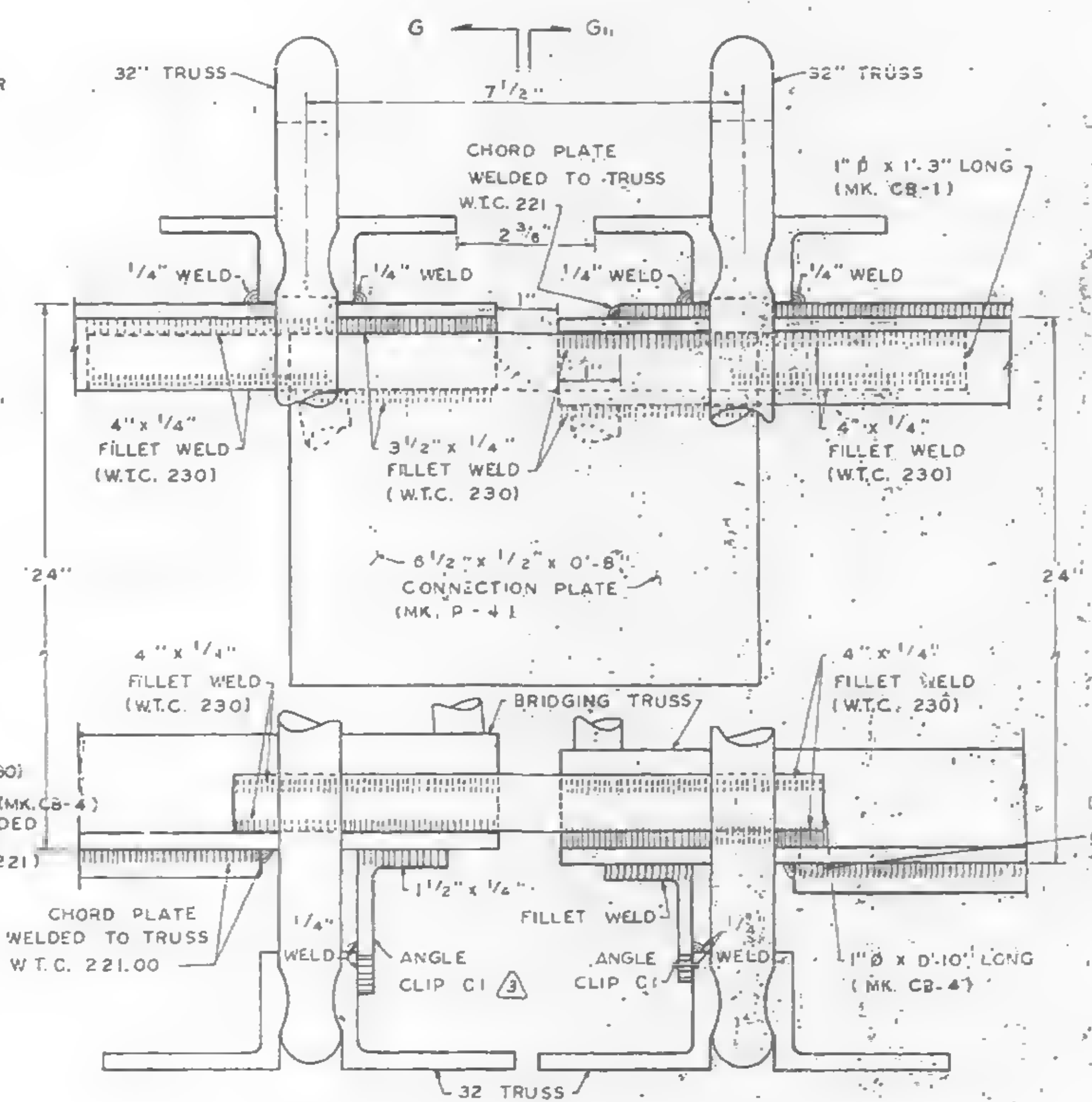
Connection Designation	Description	Drawing No.
1C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Joints	CD 201
2C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 13C, 14C & 15C)	CD 201
△ 3C	Connection of 3" x 2" x 1/4" Bridging Angles with C32T4	CD 204
4CA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 201
4CB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels H, HR, J, K, KR, M and MR)	CD 201
△ 5C	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, DR, E, ER, F, FR, G and GR except 6-C connections in Panel F and FR)	CD 201
△ 6C	Connection of 24T7, 24T7A, 24T7B and 24T14 to the C32T4	CD 201
7C	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C &11C, 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 202
9C	Reserved	
10C	Connections of the following Bridging Trusses at Panel Joints 24T[illegible] to 24T7 24T6A to 24T7A 24T6B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10, 24T10A or 24T10B Bridging at Panel Joints	CD 204
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T3 Trusses	CD 20[illegible]
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 20[illegible]
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 203
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 2[illegible]
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 206
△ 18C	Connection of 3" x 2" x 1/4" Bridging Angle with the double C32T3 trusses in Panel E & ER at second line of bridging from core end	CD 204
△ 19C	Connection of 3" x 2" x 1/4" Bridging Angle with the double C32T2 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at second line of bridging from core end	CD 204

REF. DRWG.

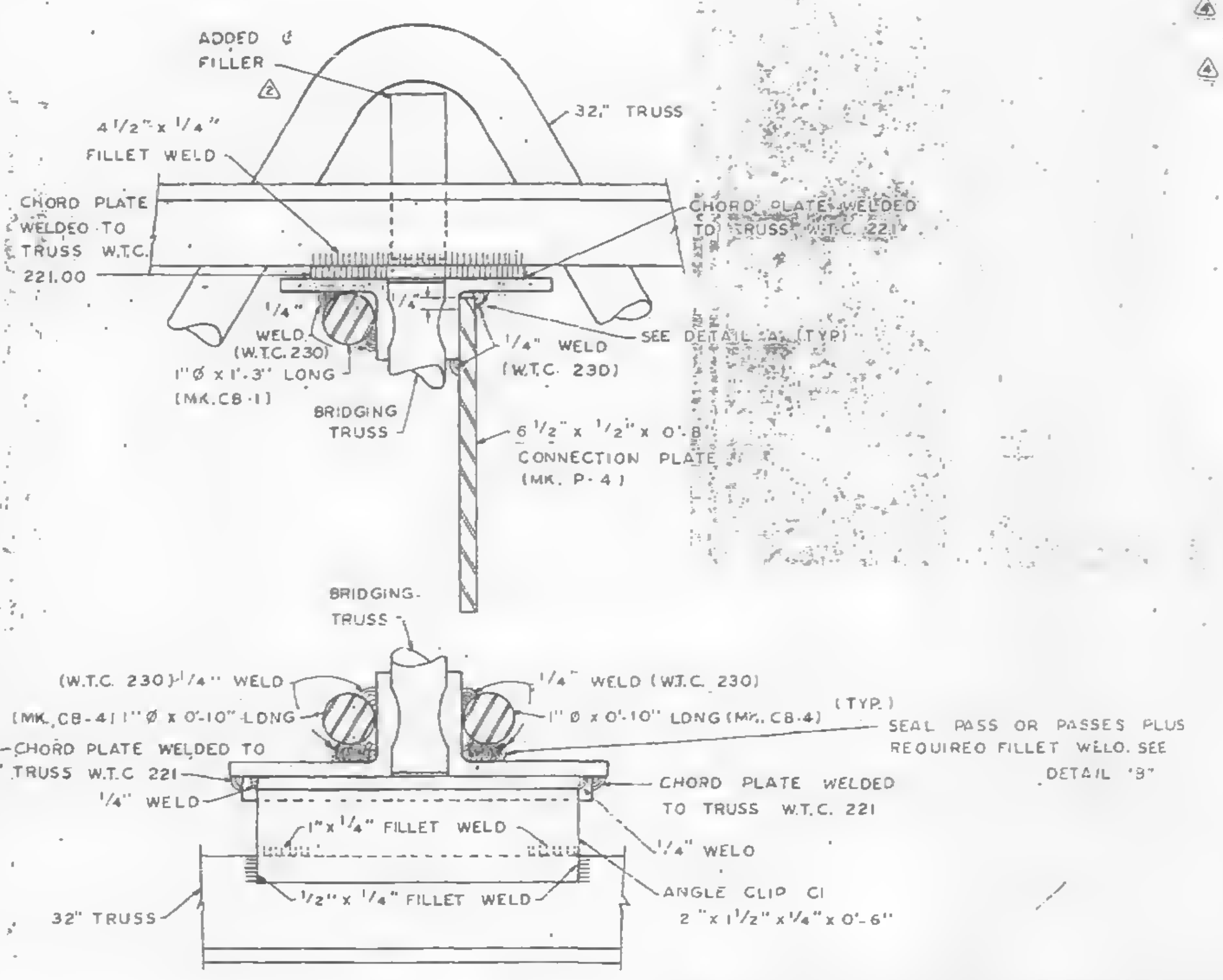
7-AB4-18	5-6-68
7-AB4-18.1	5-6-68


ADDED ø FILLER
32" TRUSS
2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 230)
1/4" WELD (W.T.C. 230)
1" ø x 1'-3" LONG (MK. CB-1)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
(MK. CB-4) 1" ø x 0'-10" LONG
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1/4" WELD (W.T.C. 230)
1" ø x 0'-10" LONG (MK. CB-4)
CHORD PLATE WELDED TO TRUSS (W.T.C. 221)
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1/2" x 1/4" ANGLE CLIP MK. C2 x 0'-6"
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G-G △


G
G1
32" TRUSS
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1" ø x 1'-3" LONG (MK. CB-1)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET WELD (W.T.C. 230)
24"
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
24"
4" x 1/4" FILLET WELD (W.T.C. 230)
BRIDGING TRUSS
4" x 1/4" FILLET WELD (W.T.C. 230)
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
1 1/2" x 1/4" FILLET WELD
1/4" WELD
ANGLE CLIP C1
ANGLE CLIP C1
WELD
1" ø x 0'-10" LONG (MK. CB-4)
32" TRUSS
G
G1

△ (8-C) CONNECTION DETAIL PANEL JOINT
24T8 TO 24T10
24T8A TO 24T10A
24T8B TO 24T10B


ADDED ¢ FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 230)
1" ø x 1'-3" LONG (MK. CB-1)
BRIDGING TRUSS
SEE DETAIL "A" (TYP.)
1/4" WELD (W.T.C. 230)
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
(MK. CB-4) 1" ø x 0'-10" LONG
1/4" WELD (W.T.C. 230)
1" ø x 0'-10" LONG (MK. CB-4)
(TYP.)
SEAL PASS OR PASSES PLUS REQUIRED FILLET WELD. SEE DETAIL "B"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
ANGLE CLIP C1 2" x 1 1/2" x 1/4" x 0'-6"
1/2" x 1/4" FILLET WELD
32" TRUSS

△ SECTION G1-G1

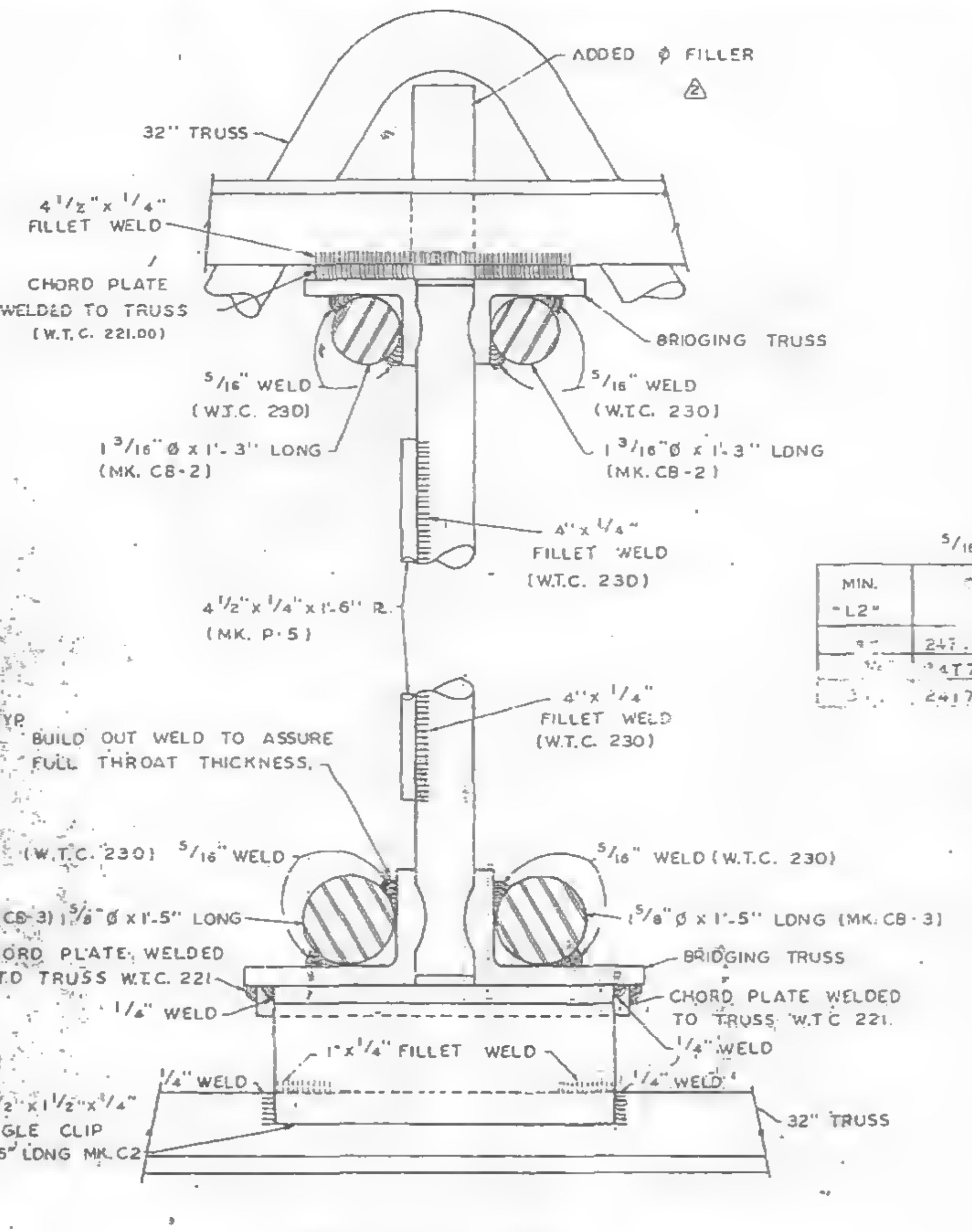
NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
△ 3. ALL PLATES & ø SPLICE BARS TO BE ASTM A36

NO.	DATE	REVISION	BY
△	7-29-68	3C, 5C, 6C, 18C & 19C IN TABLE	G.D.C.
△	7-3-68	CLIP ANGLE	L.W.H.
△	6-24-68	AS NOTED	L.W.H.
△	5-20-68	WELD CORRECTIONS	L.W.H.

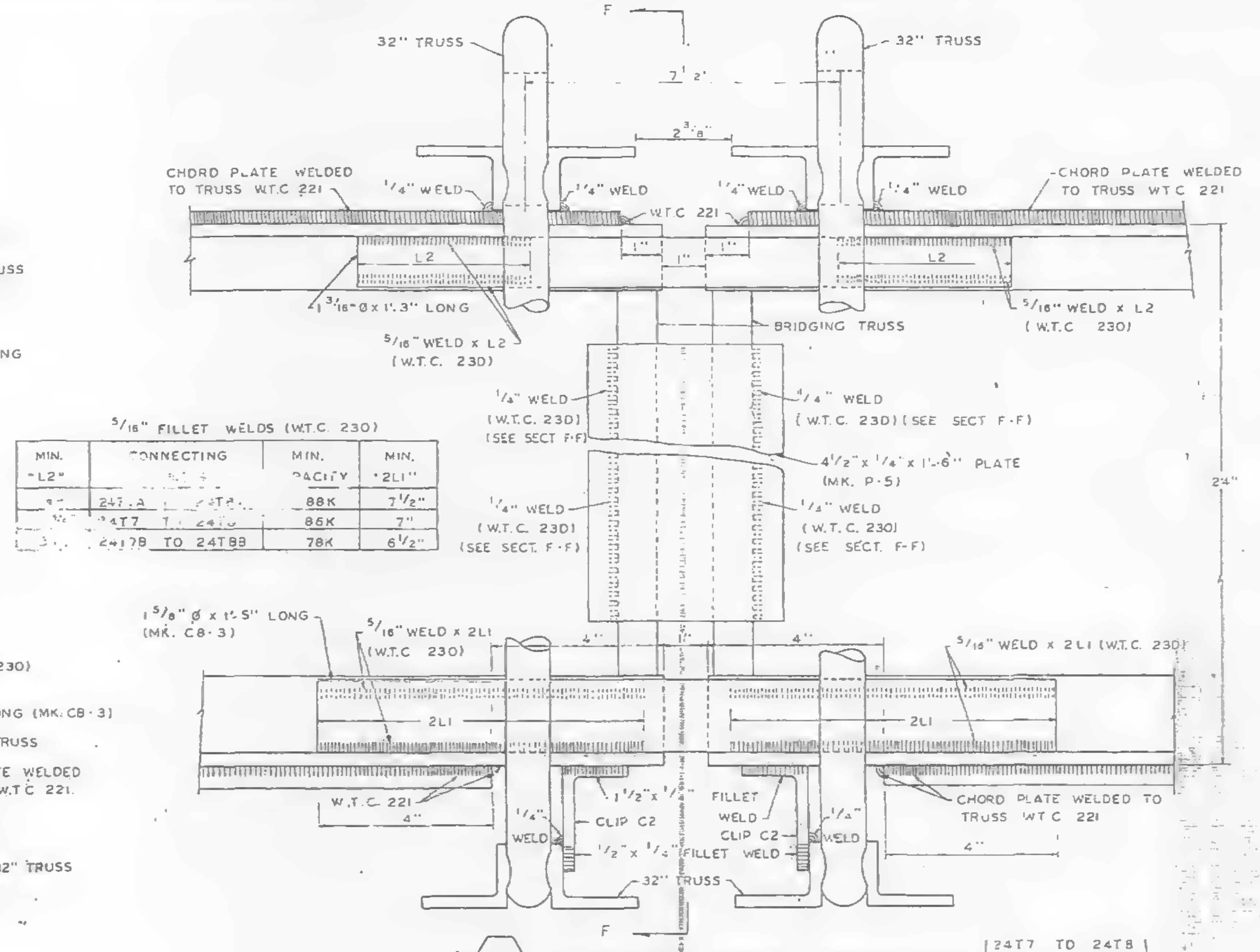
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. ________ PLATE ________
APPROVED FOR FABRICATION BY: ________ FOR P.O.N.Y.A DATE 8/16/68
DRAWN BY: Jurk DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY ________ FOR FABRICATOR DATE ____
CHECKED BY: T.M.CHURA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER
FABRICATION CONT. NO W.T.C. 221
SHEET NO. CD 202


ADDED ⌀ FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.00)
BRIDGING TRUSS
5/16" WELD (W.T.C. 230)
1 3/16" ⌀ x 1'-3" LONG (MK. C8-2)
4" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2" x 1/4" x 1'-6" R (MK. P-5)
TYP. BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 230) 5/16" WELD
(MK. C8-3) 1 5/8" ⌀ x 1'-5" LONG
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP 0'-6" LONG MK. C2
CHORD PLATE WELDED TO TRUSS W.T.C. 221.
32" TRUSS

SECTION F-F △

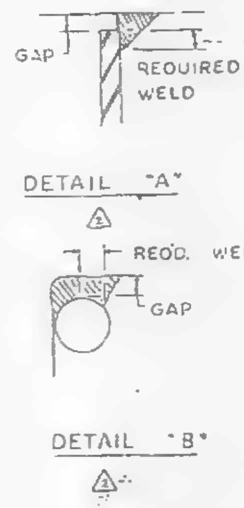

F
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
W.T.C. 221
L2
1 3/16" ⌀ x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 230)
BRIDGING TRUSS
1/4" WELD (W.T.C. 230) (SEE SECT F-F)
4 1/2" x 1/4" x 1'-6" PLATE (MK. P-5)
24"
1 5/8" ⌀ x 1'-5" LONG (MK. C8-3)
5/16" WELD x 2L1 (W.T.C. 230)
4"
2L1
CLIP C2
1 1/2" x 1/4"
FILLET WELD CLIP C2
1" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
32" TRUSS

5/16" FILLET WELDS (W.T.C. 230)

MIN. "L2"	CONNECTING [illegible]	MIN. CAPACITY	MIN. "2L1"
[illegible]	24T7A TO 24T8A	88K	7 1/2"
[illegible]	24T7 TO 24T8	86K	7"
[illegible]	24T7B TO 24T8B	78K	6 1/2"

△ (10-C) CONNECTION DETAIL PANEL JOINT

24T7 TO 24T8
24T7A TO 24T8A
24T7B TO 24T8B



DETAIL "A" △

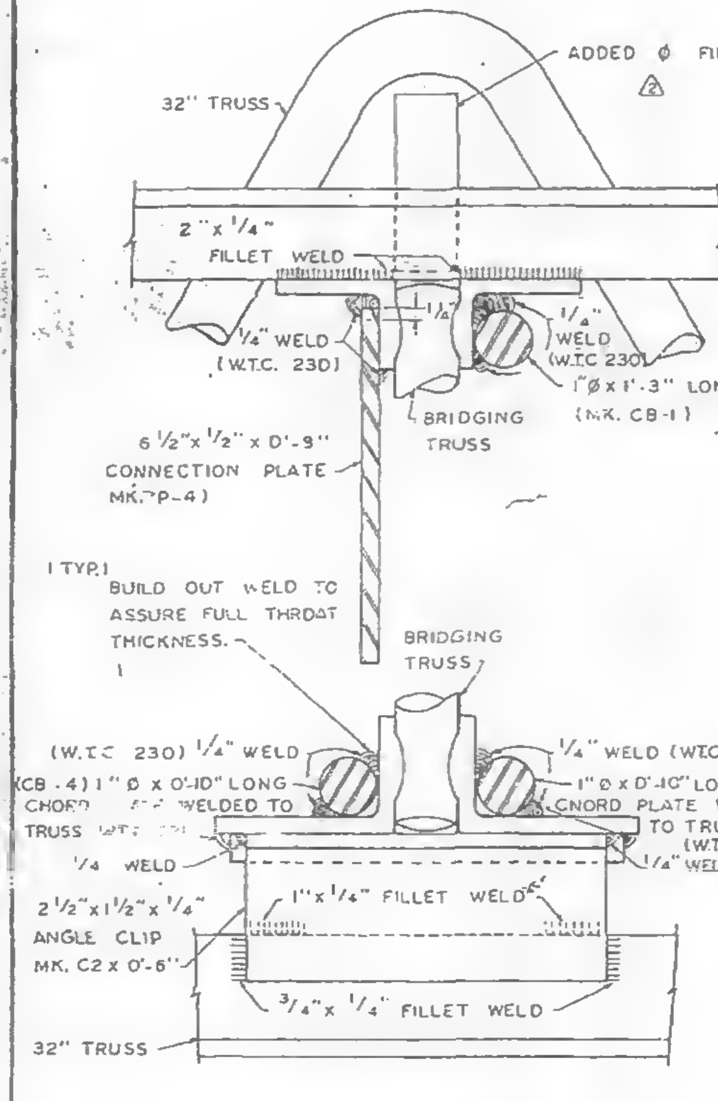
DETAIL "B" △

LIST OF FLOOR CONNECTION IDENTIFICATIONS

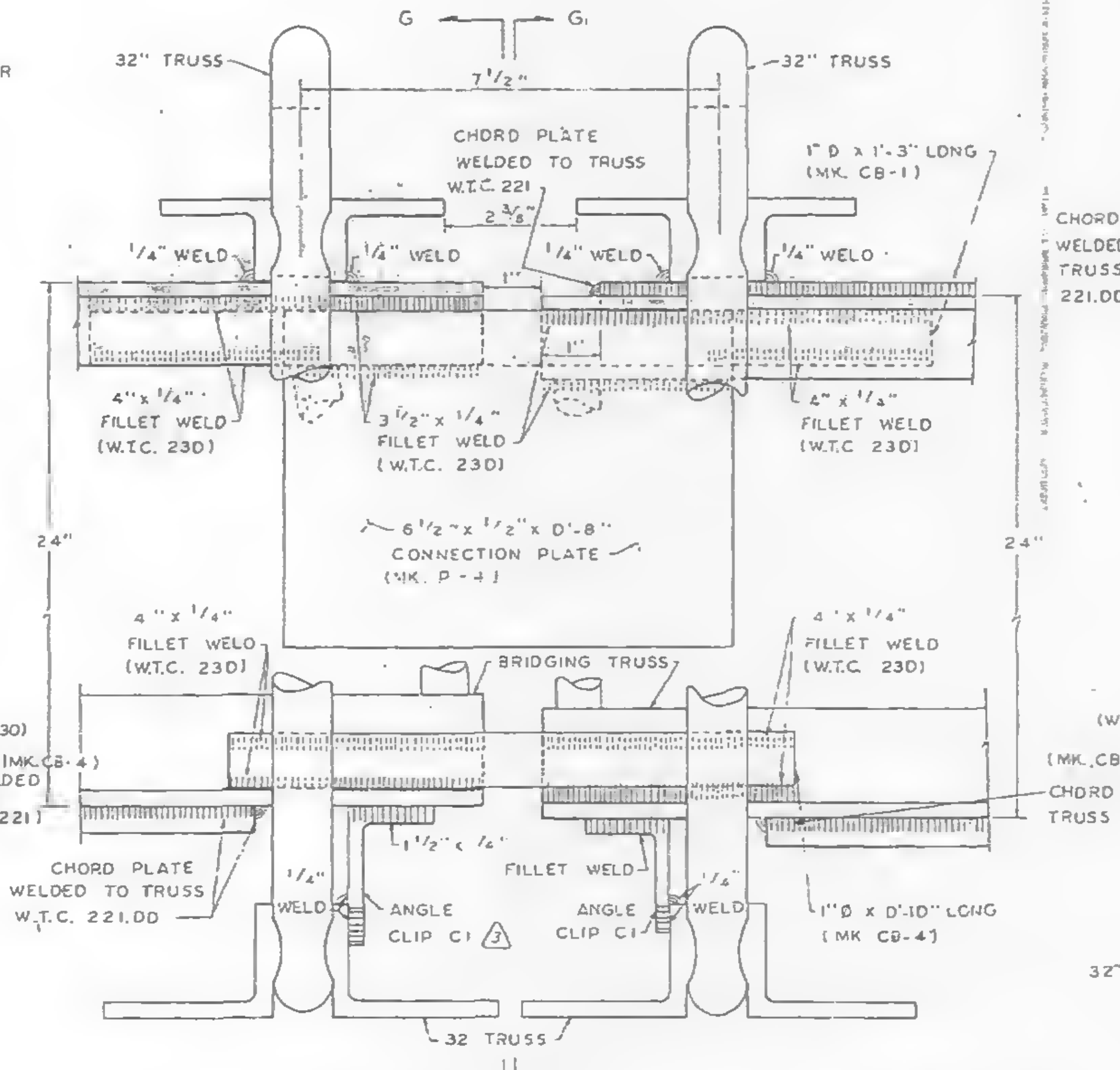
[illegible] Designation	Description	Dra. [illegible] No.
1	[illegible] Bridging Angles [illegible] Panel Joints	[illegible]
[illegible]	Connection of [illegible] 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases [illegible] 14C & 15C)	CD 201
3	Reserved	
[illegible]	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 201
[illegible]	Connection of 24T Bridging Trusses with C32 Trusses at Exterior Panel Joints (Panels H, HR, J, [illegible], M and MR)	CD 201
5C	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, DR, E, ER, F, FR, G and GR)	CD 201
6C	Reserved	
7C	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C & 11C, 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 202
9C	Reserved	
10C	Connections of the following Bridging Trusses at Panel Joints 24T5 to 24T7 24T8A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10, 24T10A or 24T10B Bridging at Panel Joints	CD 204
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T5 Trusses with double C32T3 Trusses	CD 209
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 207
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 205
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 208
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 206

REF. DRWG.

7-AB4-18 5-6-68
△ 7-AB4-18.1 5-6-68

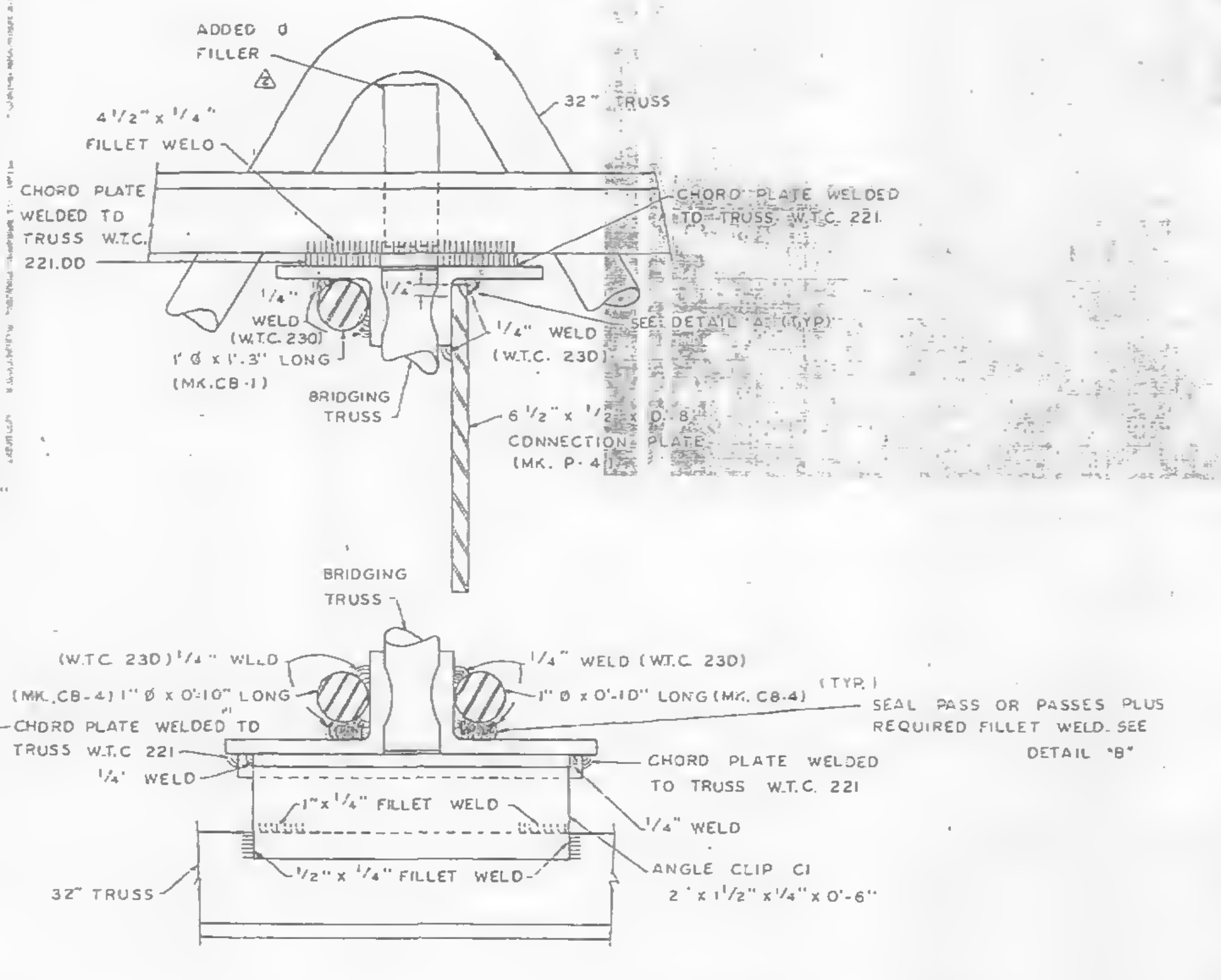

ADDED ⌀ FILLER
32" TRUSS
2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 230)
1/4" WELD (W.T.C. 230)
1" ⌀ x 1'-3" LONG (MK. C8-1)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-9" CONNECTION PLATE MK. P-4
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
1/4" WELD (W.T.C. 230)
(MK. CB-4) 1" ⌀ x 0'-10" LONG
1" ⌀ x 0'-10" LONG (MK. C8-4)
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP MK. C2 x 0'-6"
1" x 1/4" FILLET WELD
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G-G △


G G1
32" TRUSS
7 1/2"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
2 3/8"
1" ⌀ x 1'-3" LONG (MK. CB-1)
1/4" WELD
1"
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
24"
BRIDGING TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
1 1/2" x 1/4"
FILLET WELD
ANGLE CLIP C1
1" ⌀ x 0'-10" LONG (MK CB-4)
32 TRUSS

△ (8-C) CONNECTION DETAIL PANEL JOINT

24T8 TO 24T10
24T8A TO 24T10A
24T8B TO 24T10B


ADDED ⌀ FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 230)
1" ⌀ x 1'-3" LONG (MK. CB-1)
SEE DETAIL "A" (TYP)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
(W.T.C. 230) 1/4" WELD
1/4" WELD (W.T.C. 230)
(MK. CB-4) 1" ⌀ x 0'-10" LONG
1" ⌀ x 0'-10" LONG (MK. C8-4)
(TYP.) SEAL PASS OR PASSES PLUS REQUIRED FILLET WELD. SEE DETAIL "B"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
ANGLE CLIP C1 2" x 1 1/2" x 1/4" x 0'-6"
1/2" x 1/4" FILLET WELD
32" TRUSS

△ SECTION G1-G1

NOTE:
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
△ 3. ALL PLATES & ⌀ SPLICE BARS TO BE ASTM A36

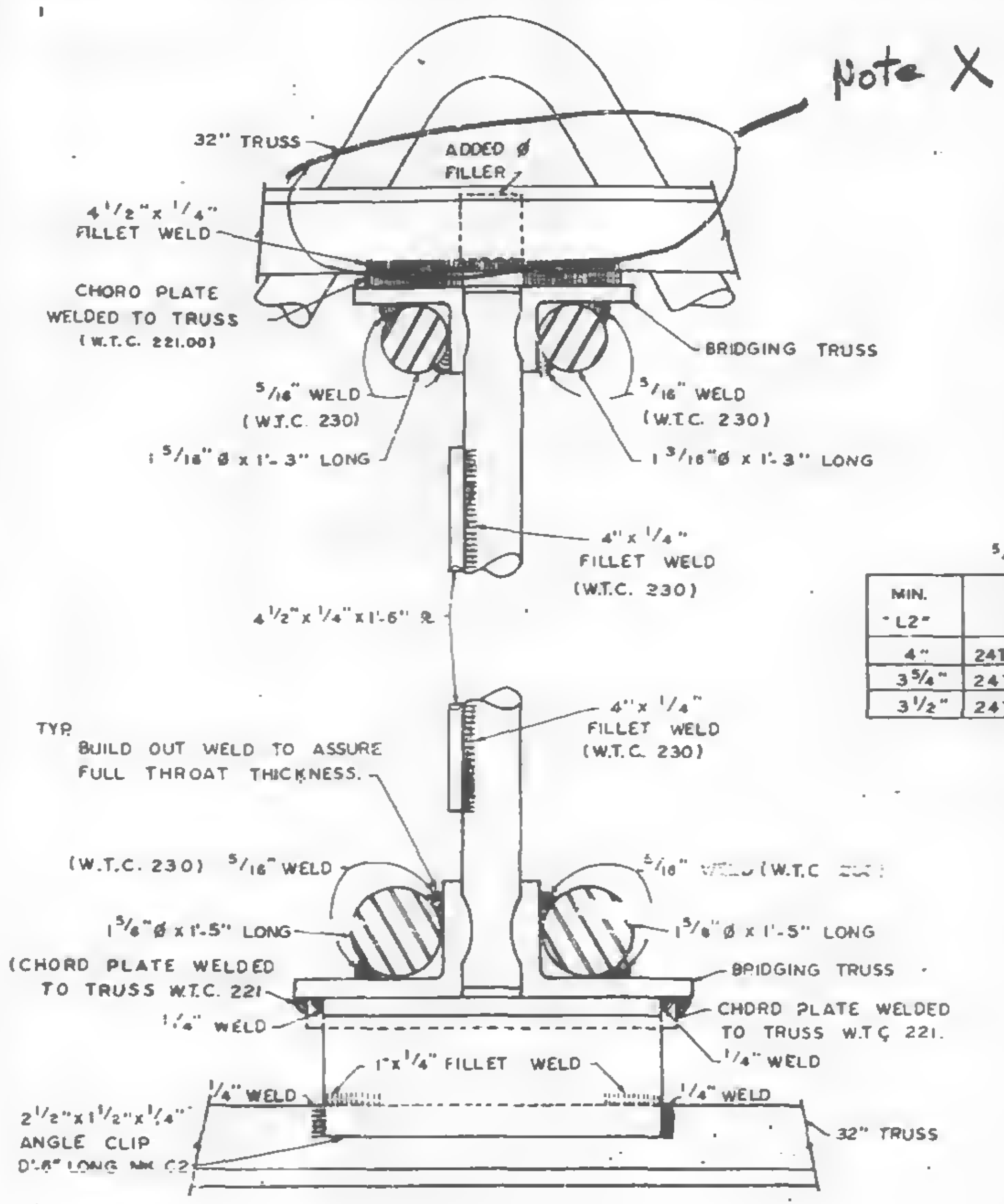
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. PLATE
APPROVED FOR FABRICATION BY: JW FOR P.O.N.Y.A DATE 7/12/68
DRAWN BY: [illegible] DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY. A.C. WEBER
FABRICATION CONT. NO W.T.C. 221
SHEET NO. CD 202

NO.	DATE	REVISION	BY
3	7-3-68	CLIP ANGLE	L.W.H.
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

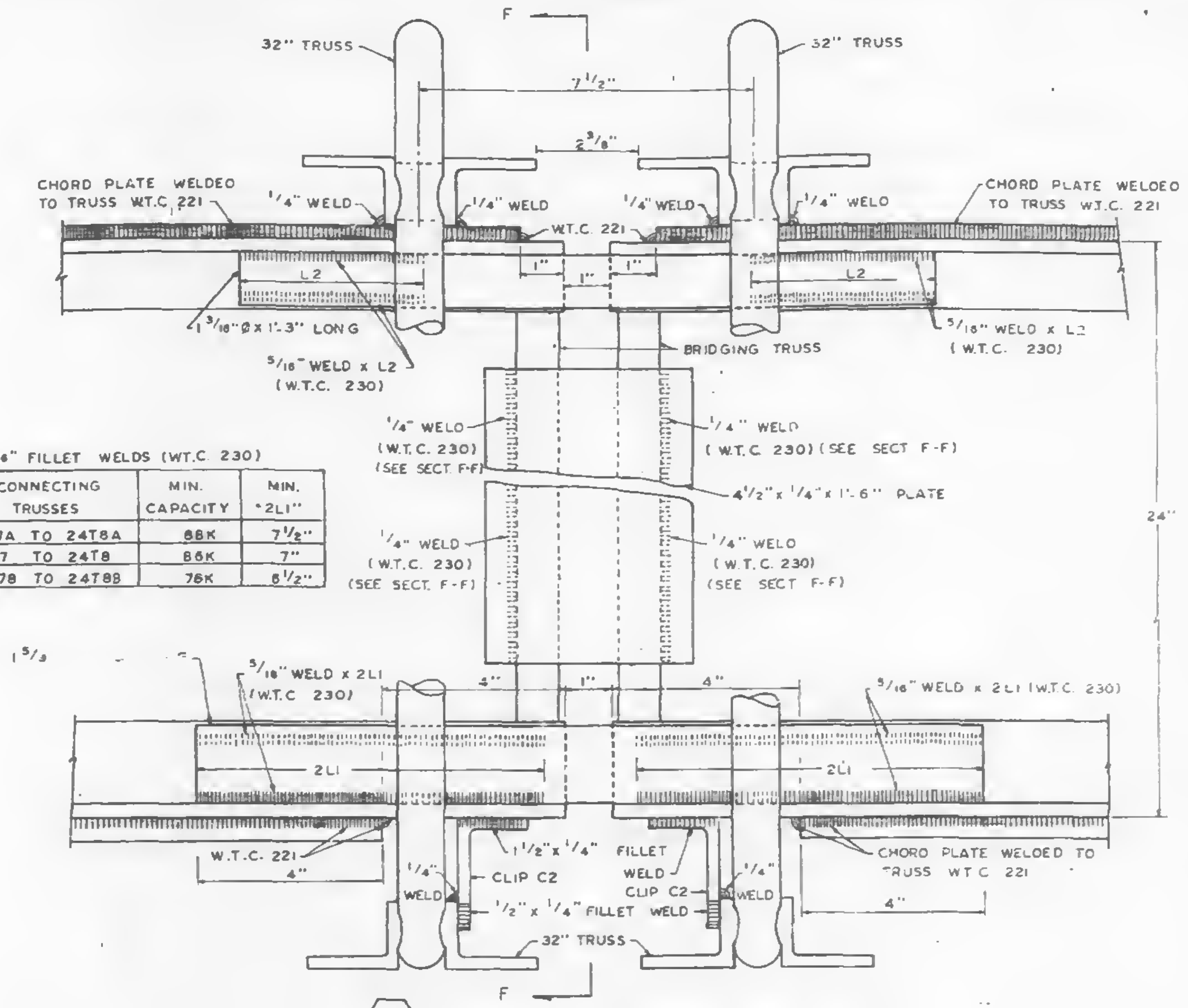
Note X: Hold for determination of Plate "X" requirements


Note X
32" TRUSS
ADDED Ø FILLER
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.00)
BRIDGING TRUSS
5/16" WELD (W.T.C 230)
1 3/16" Ø x 1'-3" LONG
4" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2" x 1/4" x 1'-6" ℞
TYP. BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 230) 5/16" WELD
1 5/8" Ø x 1'-5" LONG
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP 0'-6" LONG MK C2
32" TRUSS

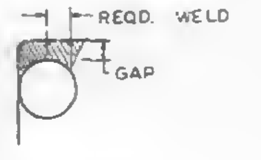
SECTION F - F

5/16" FILLET WELDS (WT.C. 230)

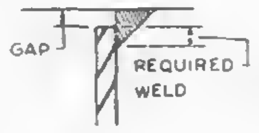
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO 24T8	86K	7"
3 1/2"	24T7B TO 24T8B	76K	6 1/2"


F
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
W.T.C. 221
1"
L2
1 3/16" Ø x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 230)
BRIDGING TRUSS
1/4" WELD (W.T.C. 230) (SEE SECT F-F)
4 1/2" x 1/4" x 1'-6" PLATE
24"
1 5/8
5/16" WELD x 2L1 (W.T.C 230)
4"
2L1
W.T.C. 221
1 1/2" x 1/4" FILLET WELD
CLIP C2
1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C 221
32" TRUSS
F

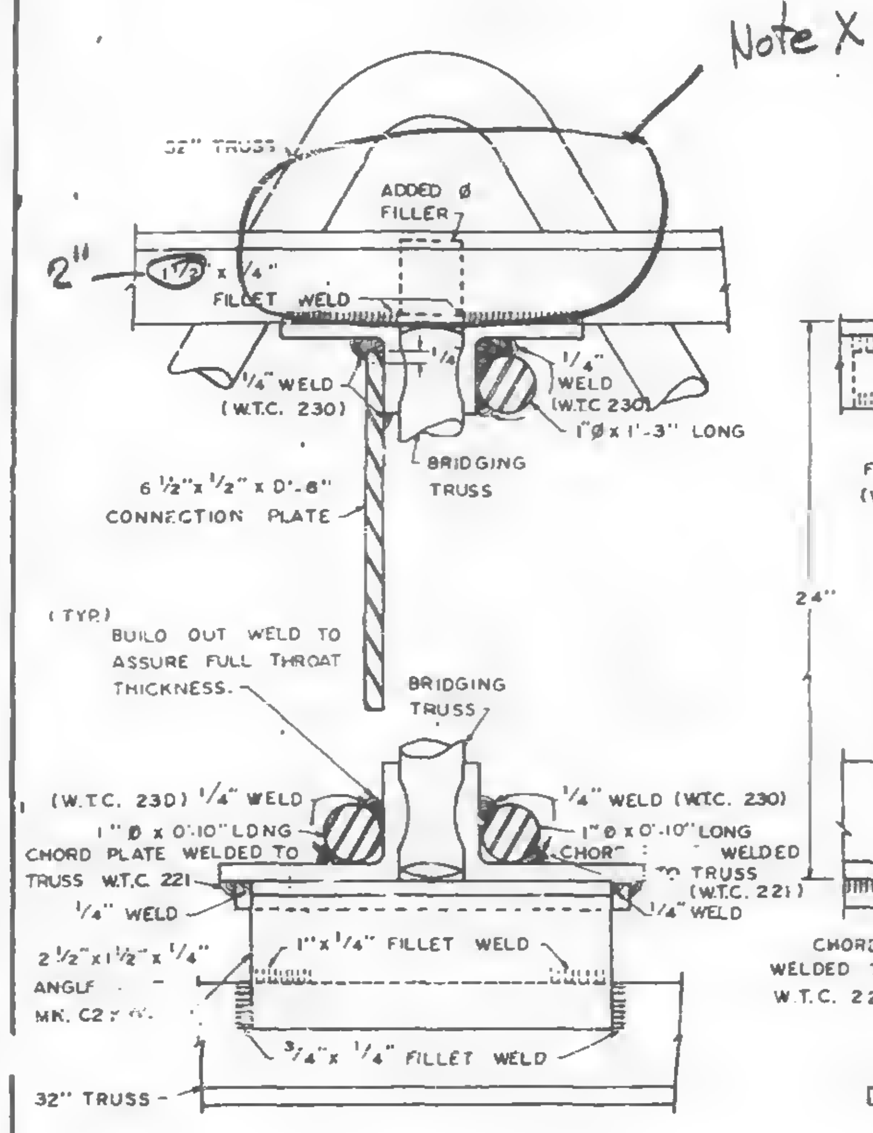
(10-C) CONNECTION DETAIL PANEL JOINT



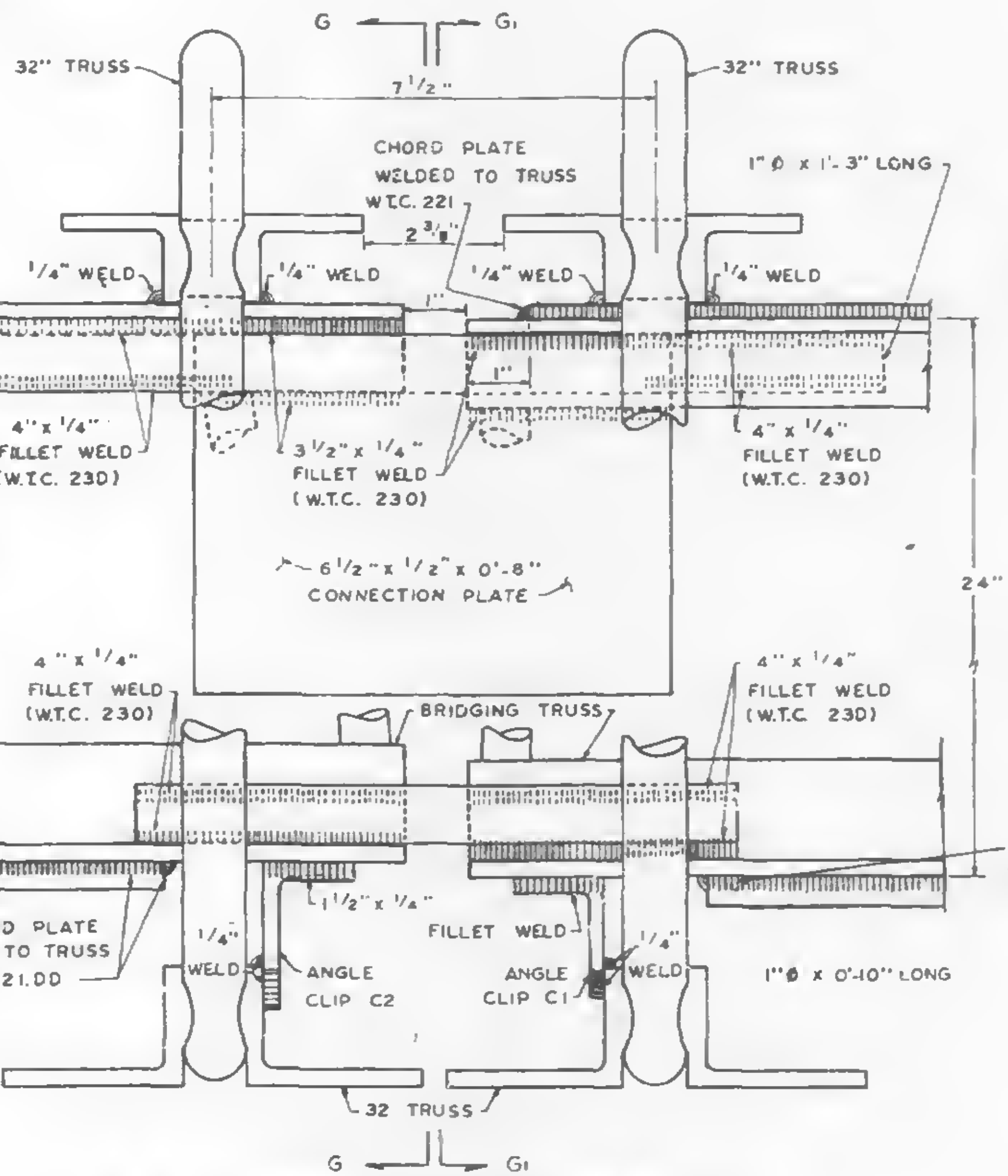
DETAIL "B"



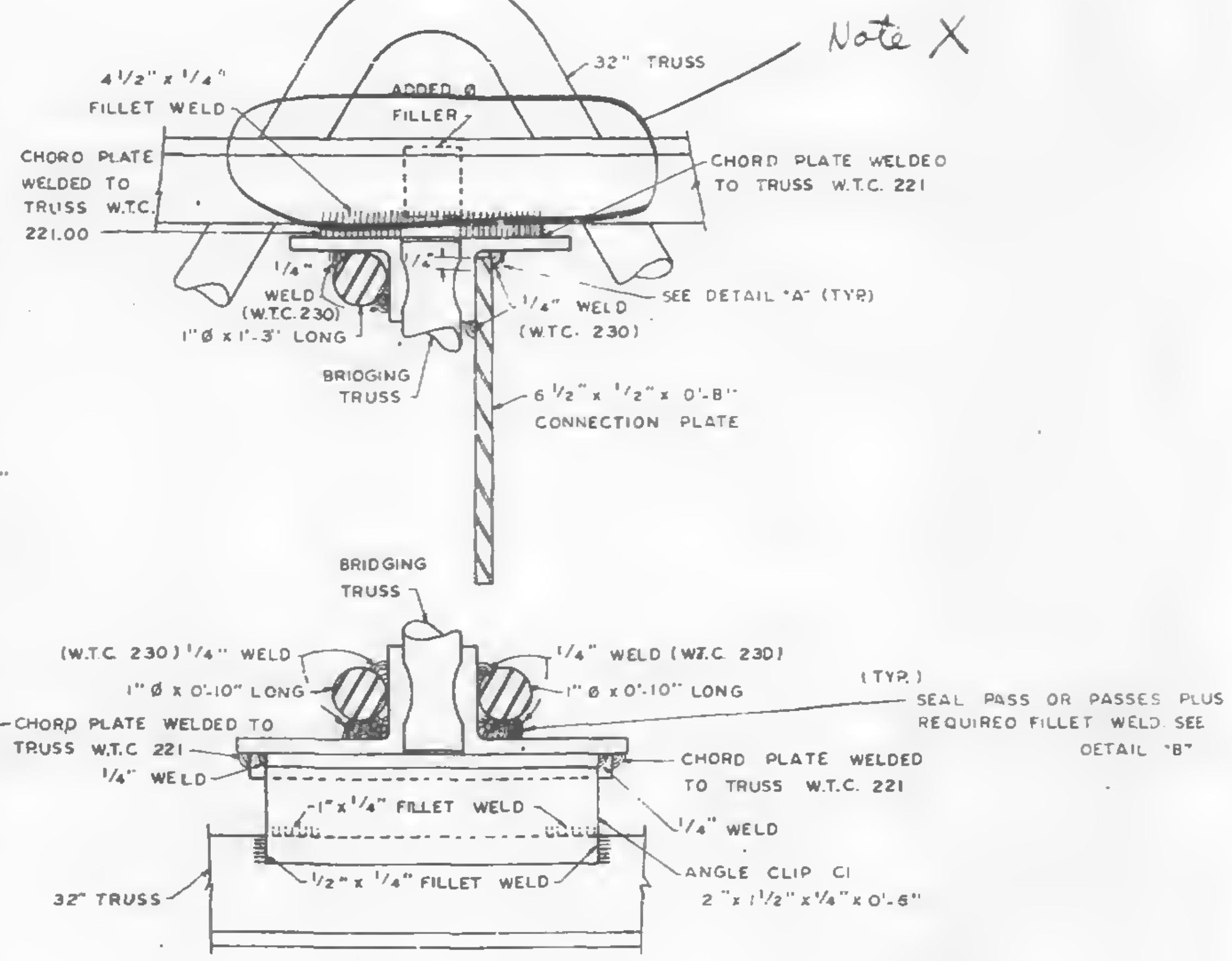
DETAIL "A"


Note X
32" TRUSS
ADDED Ø FILLER
2"
1 1/2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 230)
1" Ø x 1'-3" LONG
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 230) 1/4" WELD
1" Ø x 0'-10" LONG
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1 1/2" x 1/4" ANGLE MK. C2
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G - G


G G1
32" TRUSS
7 1/2"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
2 3/8"
1" Ø x 1'-3" LONG
1/4" WELD
1"
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
24"
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE
BRIDGING TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
1 1/2" x 1/4"
FILLET WELD
ANGLE CLIP C2
ANGLE CLIP C1
1" Ø x 0'-10" LONG
32 TRUSS
G G1

(8-C) CONNECTION DETAIL PANEL JOINT


Note X
32" TRUSS
4 1/2" x 1/4" FILLET WELD
ADDED Ø FILLER
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 230)
1" Ø x 1'-3" LONG
SEE DETAIL "A" (TYP)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE
(W.T.C. 230) 1/4" WELD
1" Ø x 0'-10" LONG
(TYP.) SEAL PASS OR PASSES PLUS REQUIRED FILLET WELD SEE DETAIL "B"
1" x 1/4" FILLET WELD
1/2" x 1/4" FILLET WELD
ANGLE CLIP C1 2" x 1 1/2" x 1/4" x 0'-6"
32" TRUSS

SECTION G1 - G1

SAMPLING PLAN
[illegible]
X
6/3/68 WAB

REF DRWG.
7-A84-18 5-17-68
7-A94-18.1 5-17-68

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. ALL PLATE & Φ Splice Bars to be ASTM A 36

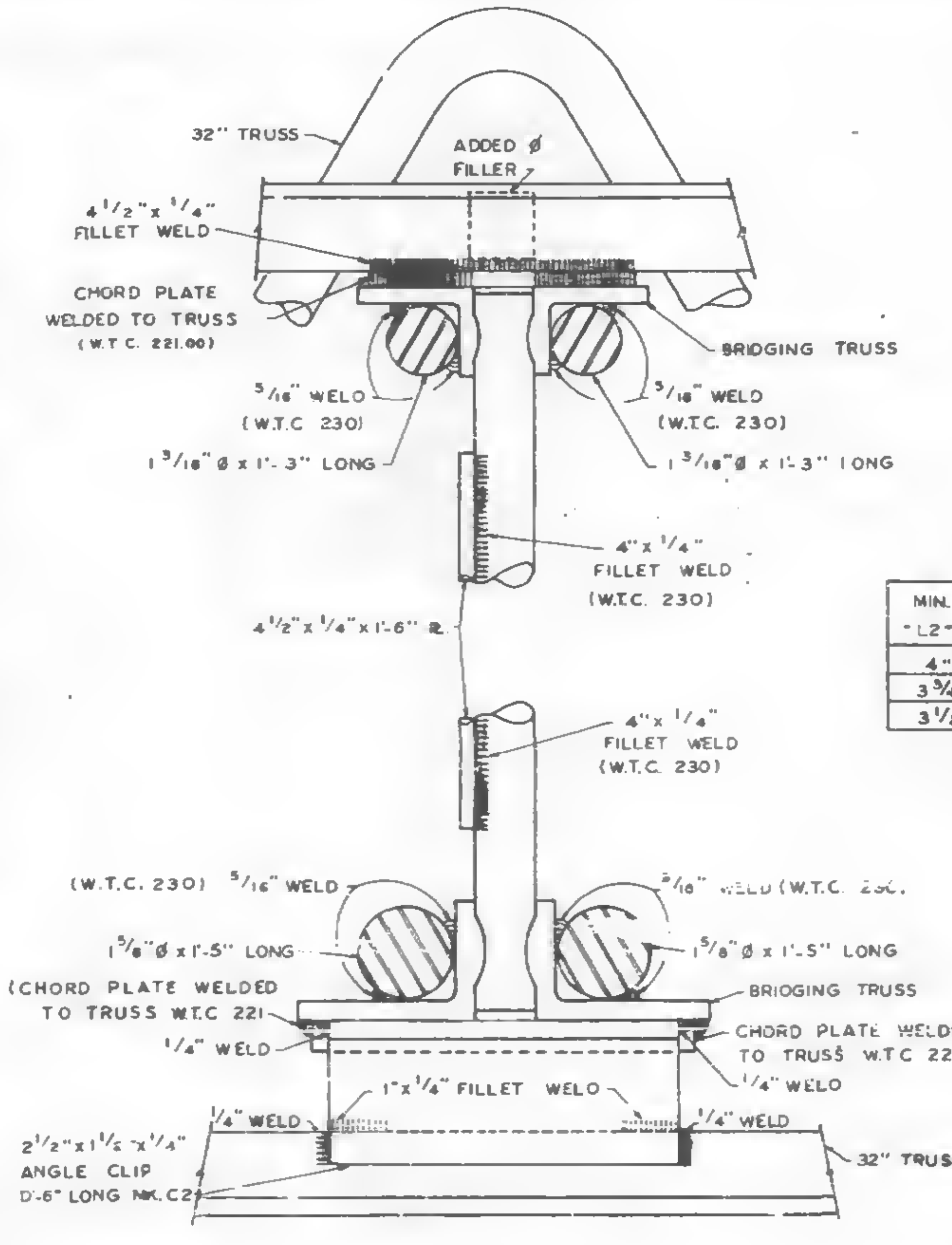
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. PLATE	
APPROVED FOR FABRICATION BY: ______ FOR P.O.N.Y.A	DATE.	DRAWN BY: Luh DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD 202

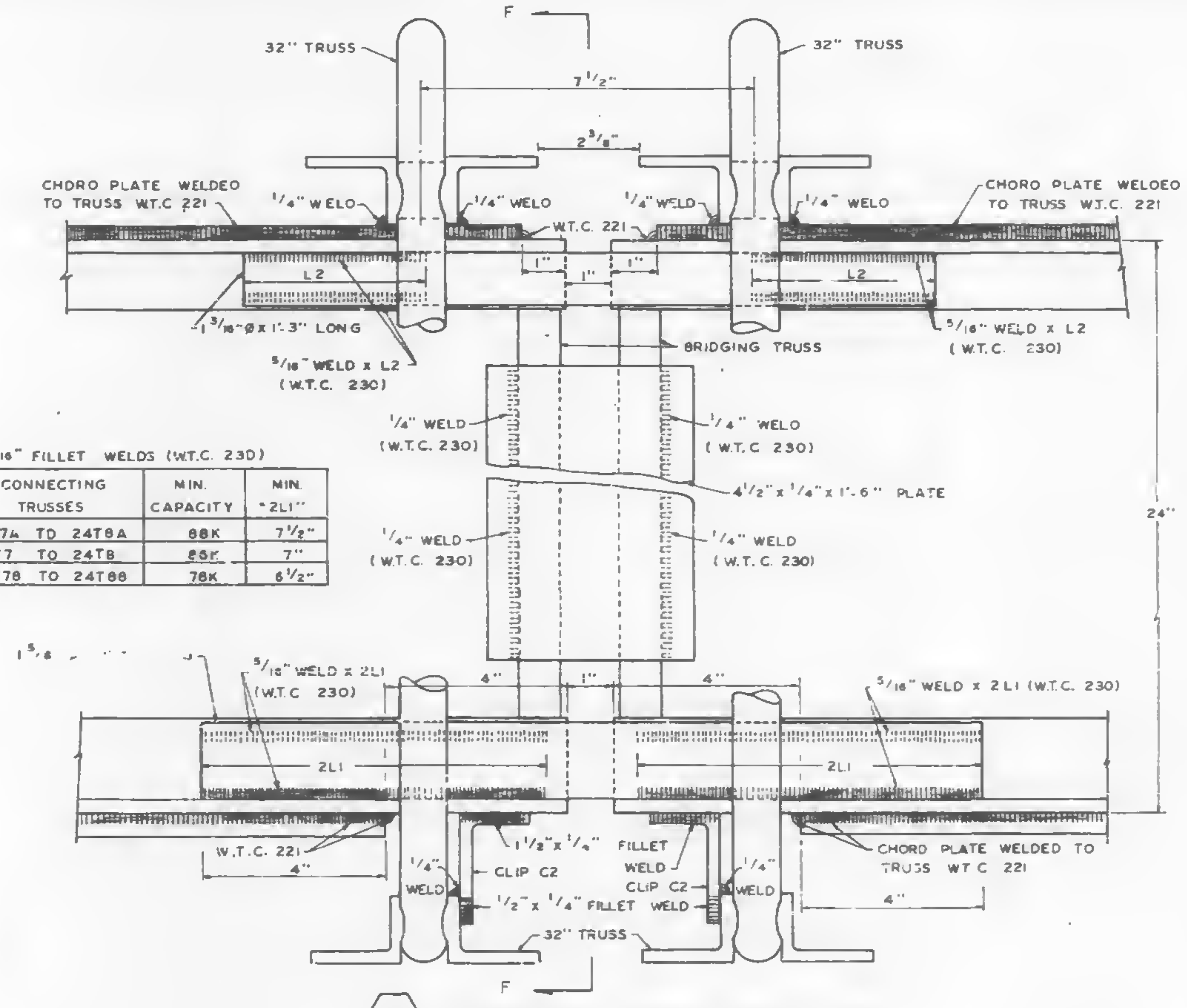
NO.	DATE	REVISION	BY
⚠	5-20-68	WELD CORRECTIONS	L.W.H.



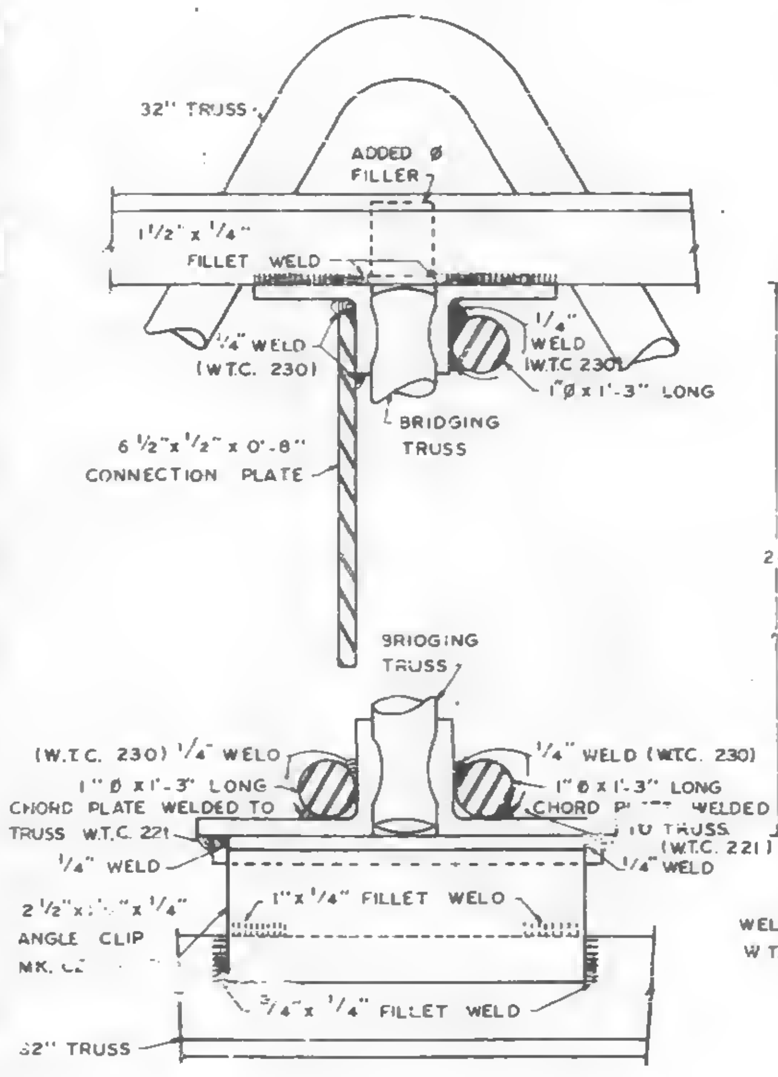
SECTION F - F

5/16" FILLET WELDS (W.T.C. 230)

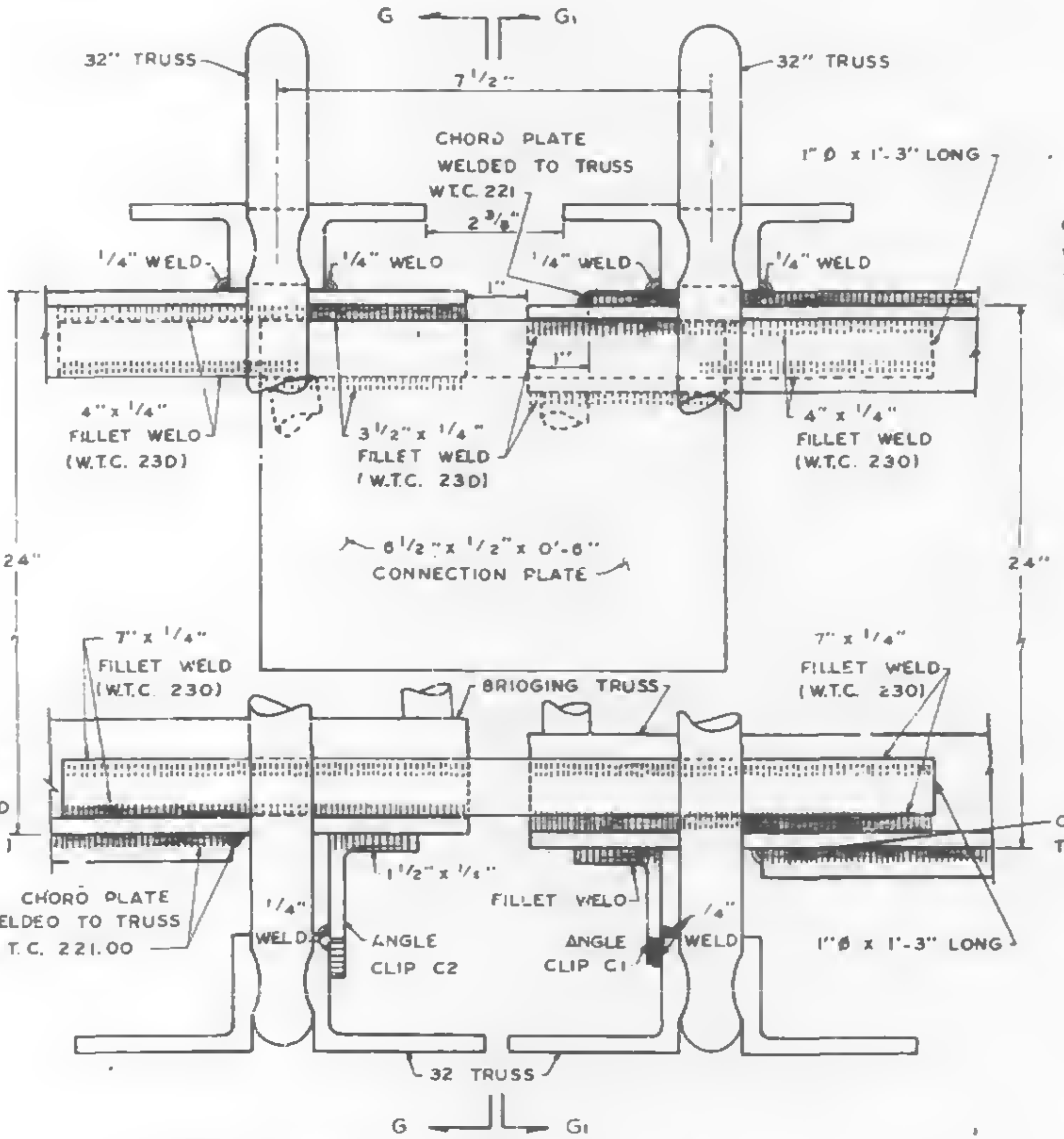
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO 24T8	85K	7"
3 1/2"	24T78 TO 24T88	78K	6 1/2"



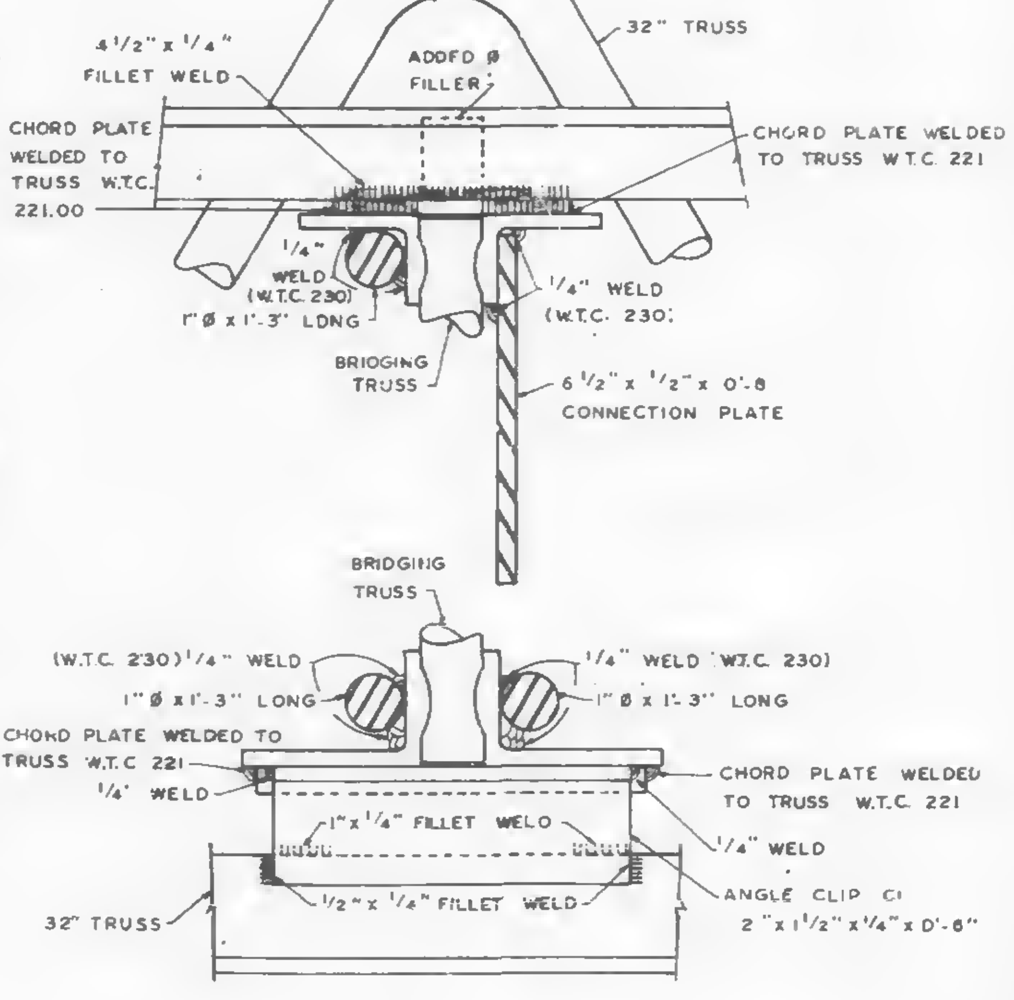
10-C CONNECTION DETAIL PANEL JOINT



SECTION G - G


G
G1
32" TRUSS
32" TRUSS
7 1/2"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
2 3/8"
1" ⌀ x 1'-3" LONG
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1"
1"
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2" x 1/2" x 0'-6" CONNECTION PLATE
24"
24"
7" x 1/4" FILLET WELD (W.T.C. 230)
BRIDGING TRUSS
7" x 1/4" FILLET WELD (W.T.C. 230)
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
1/4" WELD
1 1/2" x 1/4"
ANGLE CLIP C2
FILLET WELD
ANGLE CLIP C1
1/4" WELD
1" ⌀ x 1'-3" LONG
32 TRUSS
G
G1

8-C CONNECTION DETAIL PANEL JOINT



SECTION G1 - G1

REF. DRWG.

7-AB4-18	5-6-68
7-AB4-18.1	5-6-68

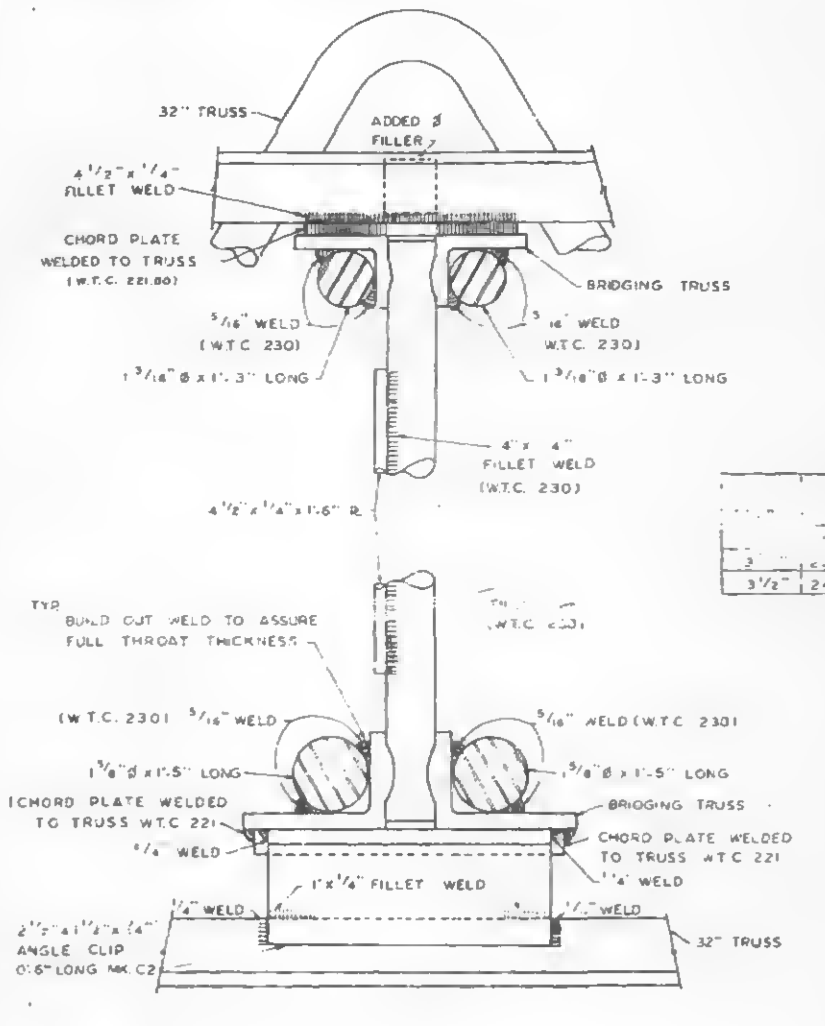
NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

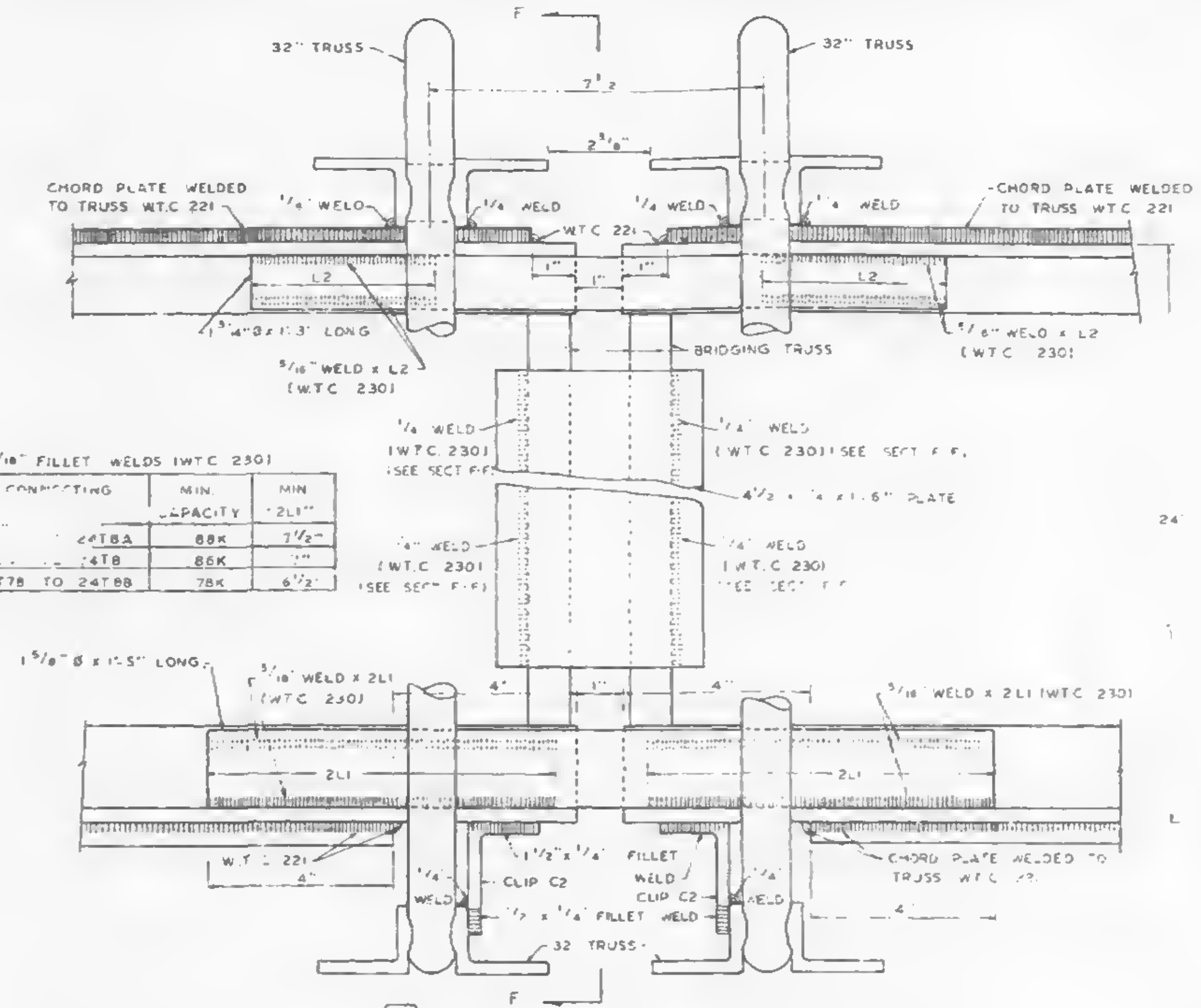
STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT. MADISON, ILLINOIS		DESIGN DRAWING NO. ______ PLATE ______	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A	DATE ______	DRAWN BY: Jwh DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE ______	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY. A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO CD 202


32" TRUSS
ADDED ⌀ FILLER
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.00)
BRIDGING TRUSS
5/16" WELD (W.T.C. 230)
1 3/16" ⌀ x 1'-3" LONG
4" x 4" FILLET WELD (W.T.C. 230)
4 1/2" x 1/4" x 1'-6" PL
TYP BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS
1 5/8" ⌀ x 1'-5" LONG
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP 0'-6" LONG MK C2
32" TRUSS

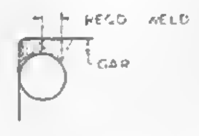
SECTION F-F


F
32" TRUSS
7 1/2"
2 5/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
W.T.C. 221
L2
1 3/4" ⌀ x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 230)
BRIDGING TRUSS
1/4" WELD (W.T.C. 230) (SEE SECT F-F)
4 1/2" x 1/4" x 1'-6" PLATE
1 5/8" ⌀ x 1'-5" LONG
5/16" WELD x 2L1 (W.T.C. 230)
2L1
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1 1/2" x 1/4" FILLET WELD
CLIP C2
32" TRUSS
24

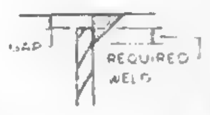
5/16" FILLET WELDS (WTC 230)

[illegible]	CONNECTING	MIN. CAPACITY	MIN "2L1"
	24T8A	88K	7 1/2"
3"	24T8	86K	[illegible]
3 1/2"	24T78 TO 24T88	78K	6 1/2"

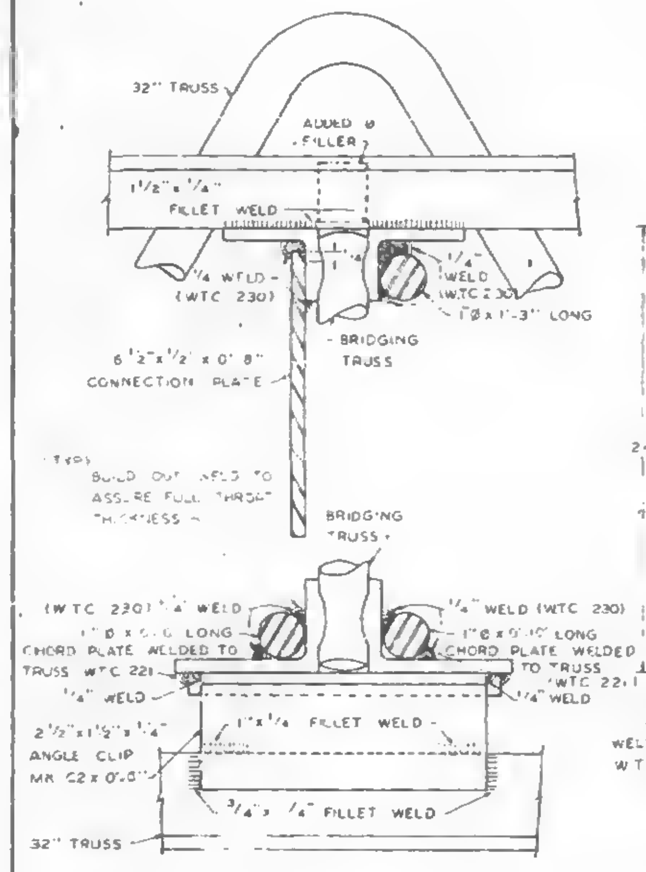
(10-C) CONNECTION DETAIL PANEL JOINT



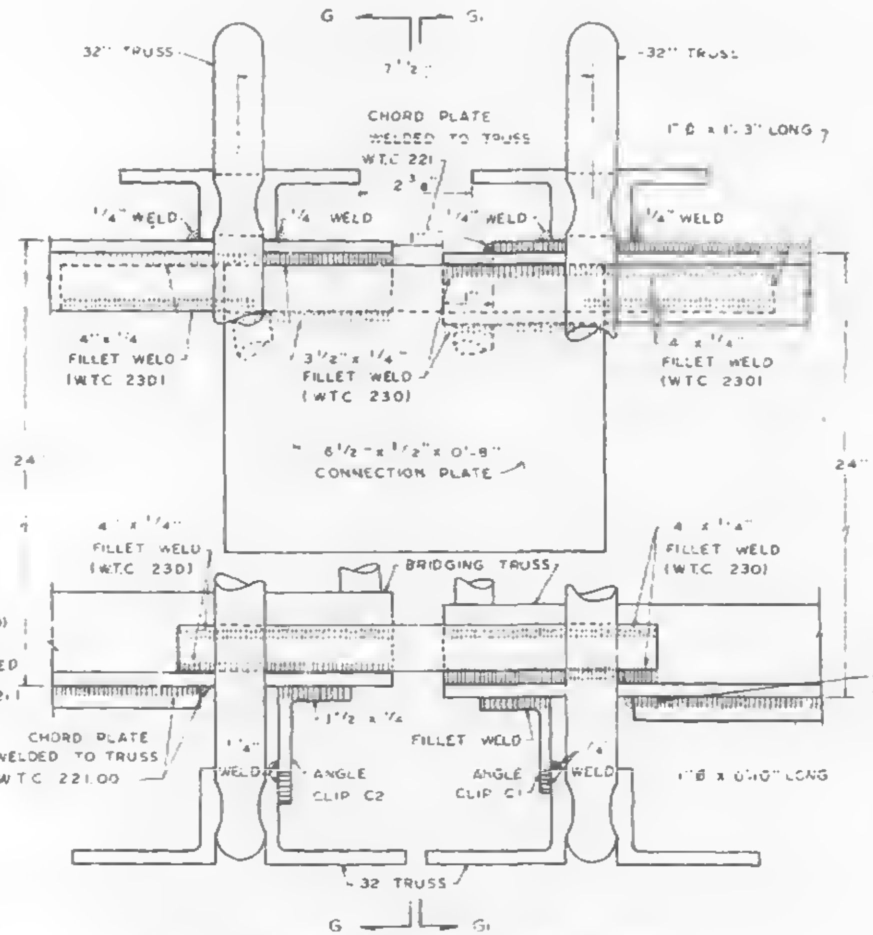
DETAIL "B"



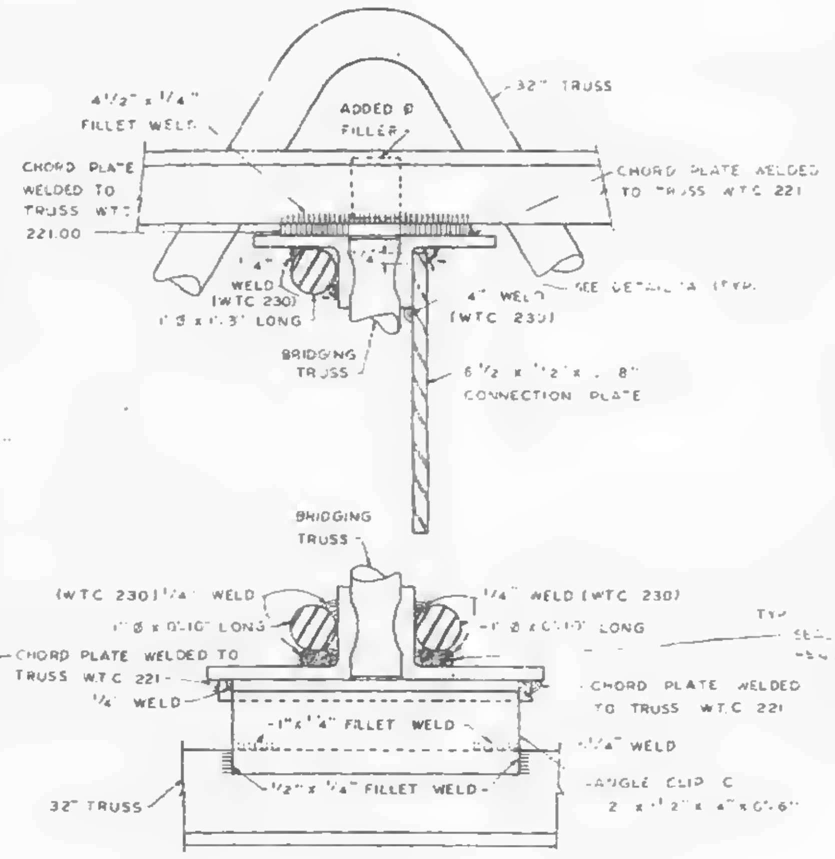
DETAIL "A"


32" TRUSS
ADDED ⌀ FILLER
1 1/2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 230)
1" ⌀ x 1'-3" LONG
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE
TYP BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS
(W.T.C. 230) 1/4" WELD
1" ⌀ x 0'-10" LONG
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP MK C2 x 0'-6"
1" x 1/4" FILLET WELD
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G-G


G
G1
32" TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1" ⌀ x 1'-3" LONG
1/4" WELD
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE
24"
BRIDGING TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
ANGLE CLIP C2
ANGLE CLIP C1
FILLET WELD
1" ⌀ x 0'-10" LONG
32" TRUSS

(8-C) CONNECTION DETAIL PANEL JOINT


4 1/2" x 1/4" FILLET WELD
ADDED ⌀ FILLER
32" TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 230)
1" ⌀ x 1'-3" LONG
SEE DETAIL "A" (TYP)
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
1" ⌀ x 0'-10" LONG
1" x 1/4" FILLET WELD
1/4" WELD
ANGLE CLIP C 2 x 1 1/2" x 4" x 0'-6"
1 1/2" x 1/4" FILLET WELD
32" TRUSS

SECTION G1-G1

REF DRWG
7-A84-18 5-17-68
7-A84-18 J 5-17-68

NOTE
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY WTC 223
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

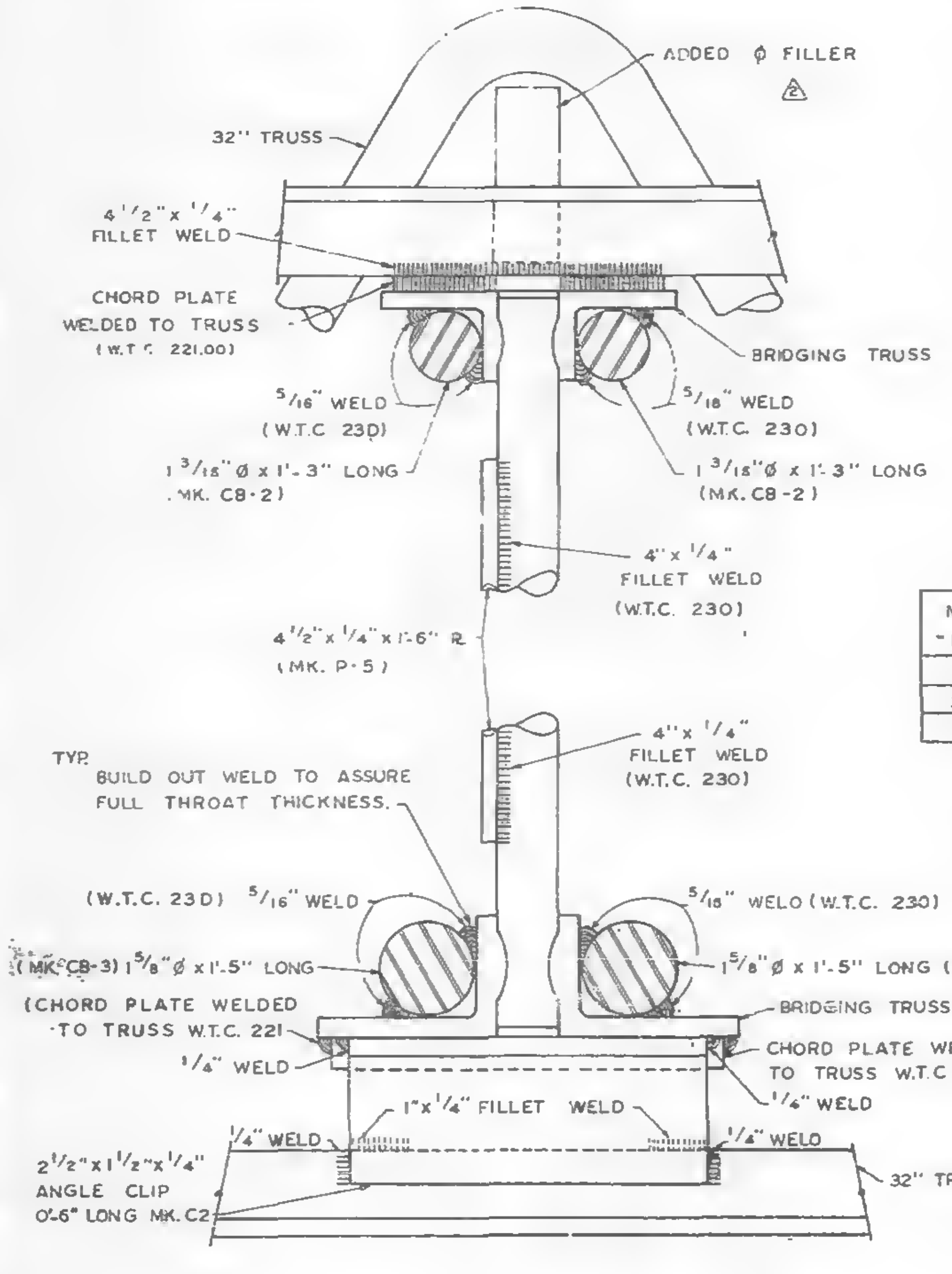
CONNECTION DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

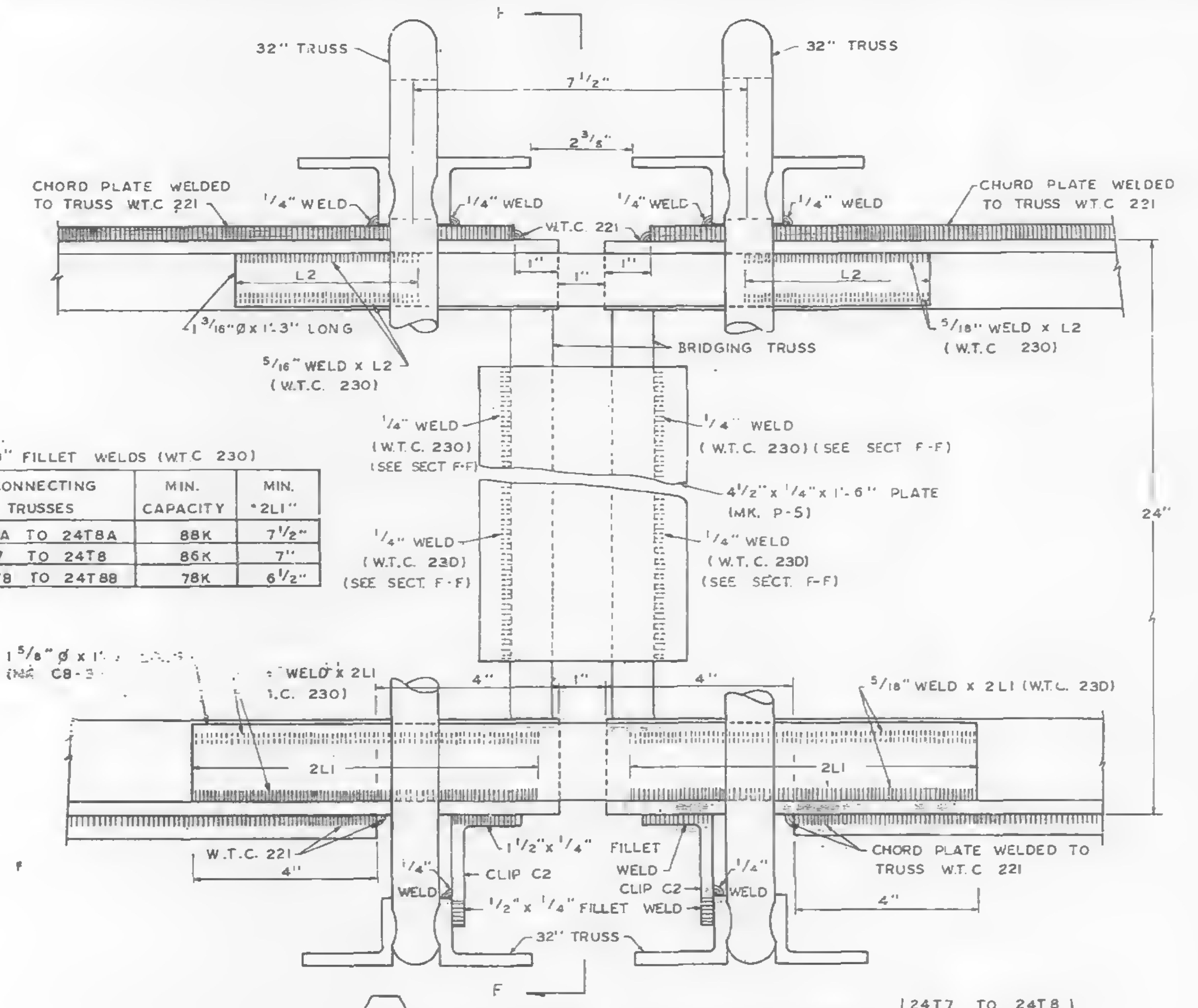
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY Luh DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 202

NO	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	L.A.H.


ADDED ϕ FILLER △
32" TRUSS
4 1/2"x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.00)
BRIDGING TRUSS
5/16" WELD (W.T.C. 230)
5/16" WELD (W.T.C. 230)
1 3/16" ϕ x 1'-3" LONG (MK. CB-2)
1 3/16" ϕ x 1'-3" LONG (MK. CB-2)
4" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2"x 1/4"x 1'-6" ℞ (MK. P-5)
4" x 1/4" FILLET WELD (W.T.C. 230)
TYP. BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 230) 5/16" WELD
5/16" WELD (W.T.C. 230)
(MK. CB-3) 1 5/8" ϕ x 1'-5" LONG
1 5/8" ϕ x 1'-5" LONG (MK. CB-3)
(CHORD PLATE WELDED TO TRUSS W.T.C. 221
BRIDGING TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C 221.
1/4" WELD
1/4" WELD
1" x 1/4" FILLET WELD
1/4" WELD
1/4" WELD
2 1/2"x 1 1/2"x 1/4" ANGLE CLIP 0'-6" LONG MK. C2
32" TRUSS

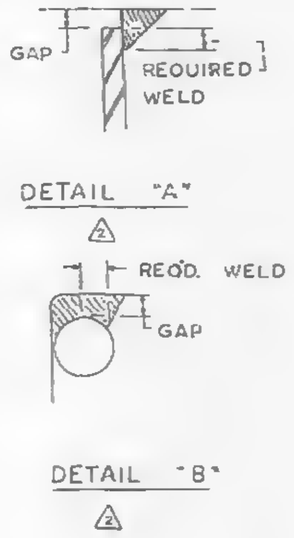
SECTION F-F △


F
32" TRUSS
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
W.T.C. 221
CHORD PLATE WELDED TO TRUSS W.T.C. 221
L2
1"
1"
1"
L2
1 3/16" ϕ x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 230)
BRIDGING TRUSS
5/16" WELD x L2 (W.T.C. 230)
1/4" WELD (W.T.C. 230) (SEE SECT F-F)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
4 1/2"x 1/4"x 1'-6" PLATE (MK. P-5)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
1/4" WELD (W.T.C. 230) (SEE SECT. F-F)
24"
1 5/8" ϕ x 1' (MK. CB-3
WELD x 2L1 (W.T.C. 230)
4"
1"
4"
5/16" WELD x 2L1 (W.T.C. 230)
2L1
2L1
W.T.C. 221
4"
1/4" WELD
1 1/2"x 1/4" FILLET WELD CLIP C2
CLIP C2
1/4" WELD
1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
4"
32" TRUSS
F

5/16" FILLET WELDS (W.T.C 230)

MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO 24T8	86K	7"
3 1/2"	24T7B TO 24T8B	78K	6 1/2"

△ 10-C CONNECTION DETAIL PANEL JOINT (24T7 TO 24T8, 24T7A TO 24T8A, 24T7B TO 24TBB)



DETAIL "A" △

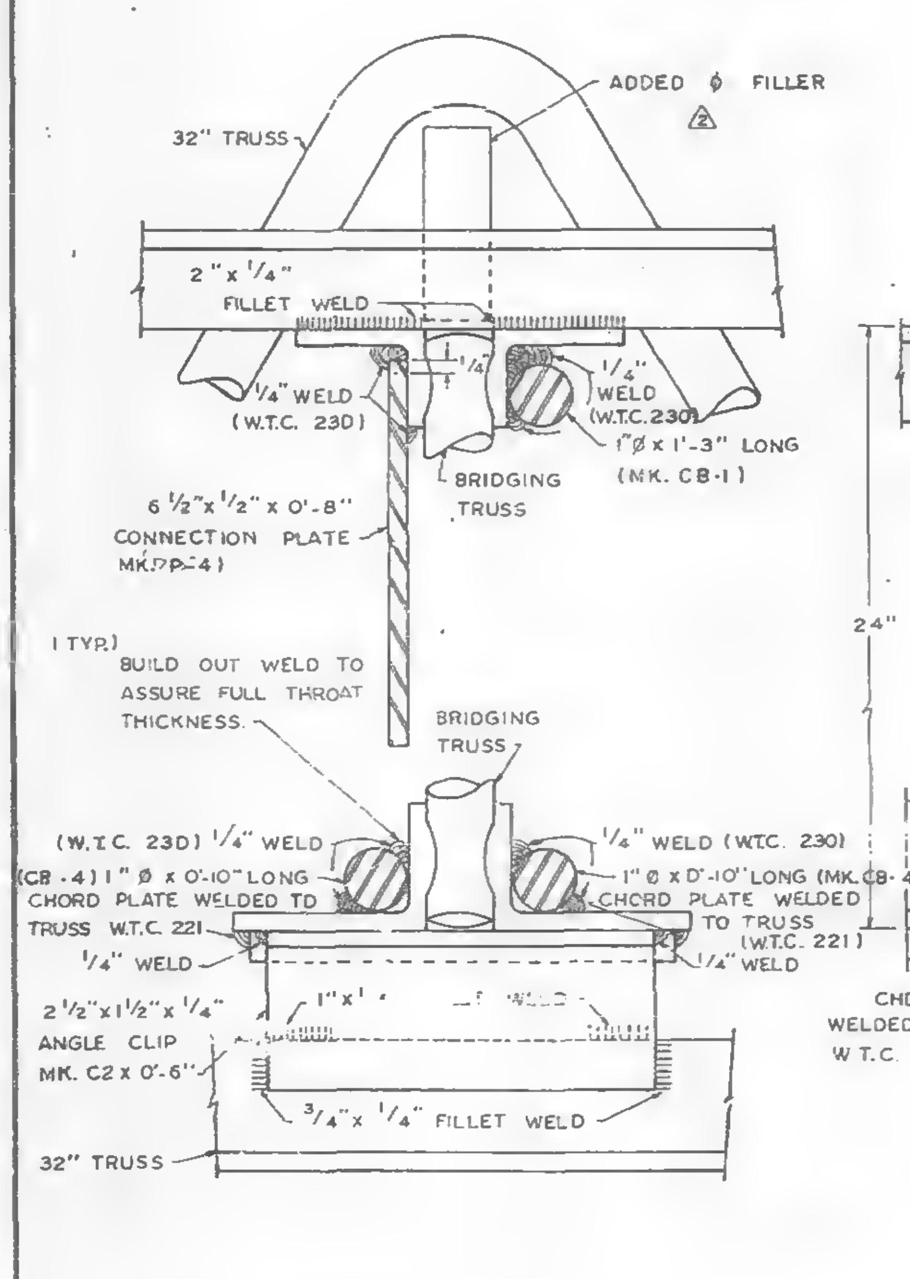
DETAIL "B" △

LIST OF FLOOR CONNECTION IDENTIFICATIONS

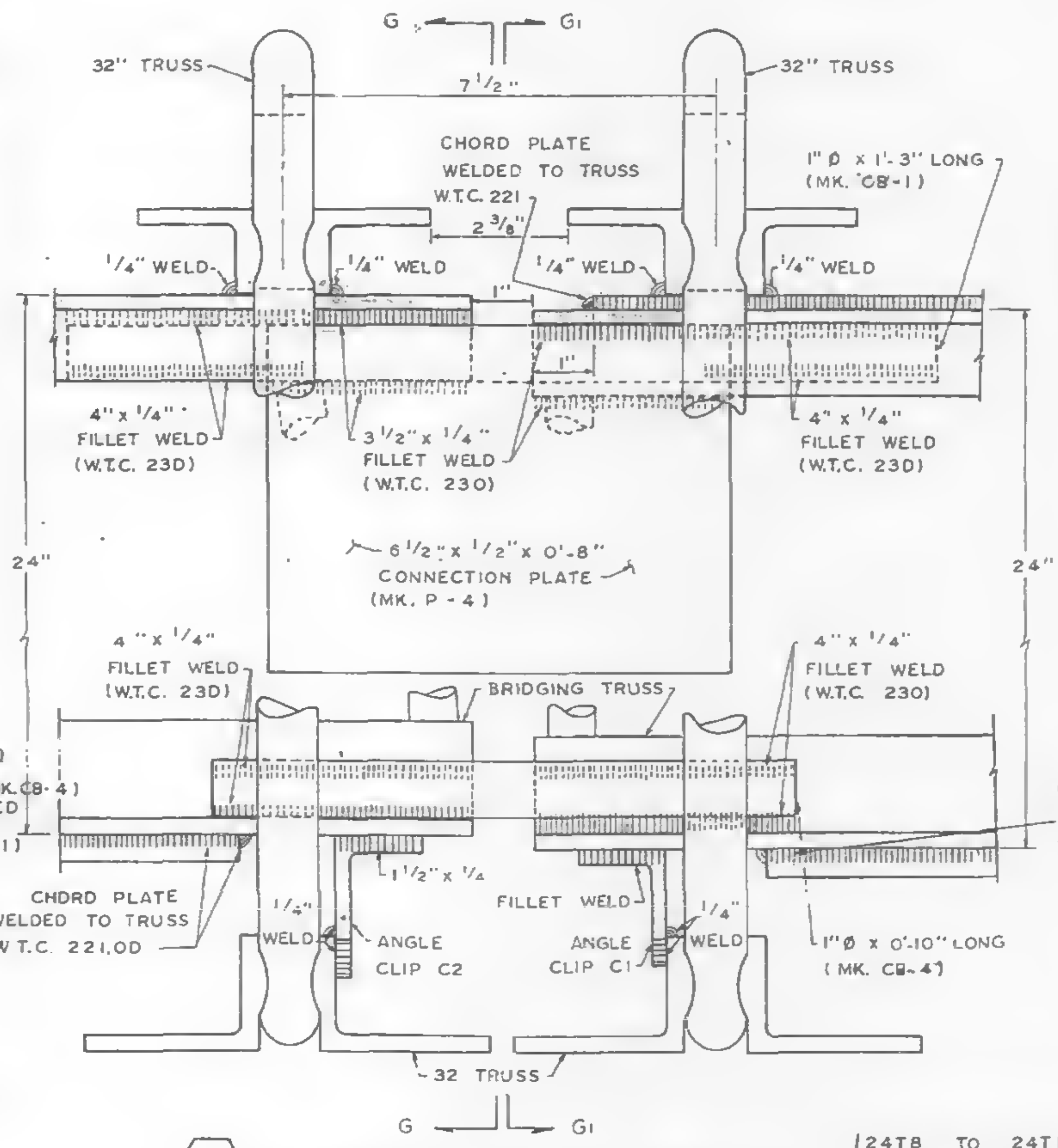
Connection Designation	Description	Drawing No.
1C	[illegible] x 1/4" Bridging Angles [illegible] at Interior Panel Joints	CD 201
[illegible]	[illegible] x 2 x 1/4" Bridging Angles [illegible] Trusses at Panel Joints (Except [illegible] 14C & 15C)	CD 201
[illegible]	Reserve	
	Connection [illegible] Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, [illegible]	CD 201
	Connection of [illegible] Bridging Trusses with C32 [illegible] Interior Panel Joints (Panels H, [illegible] and MR)	CD 201
5	Connection of 24T Bridging Trusses with C32 Trusses [illegible] Interior Panel Joints (Panels D, [illegible] and GR)	CD 201
6C	Reserve	
[illegible]	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C & 11C, 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8 to 24T10A 24T8 to 24T10B	CD 202
9C	Reserved	
10C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7 24T8A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10. 24T10A or 24T10B Bridging at Panel Joints	CD 204
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T8 Trusses	CD 209
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 207
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 205
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 208
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 206

REF. DRWG.

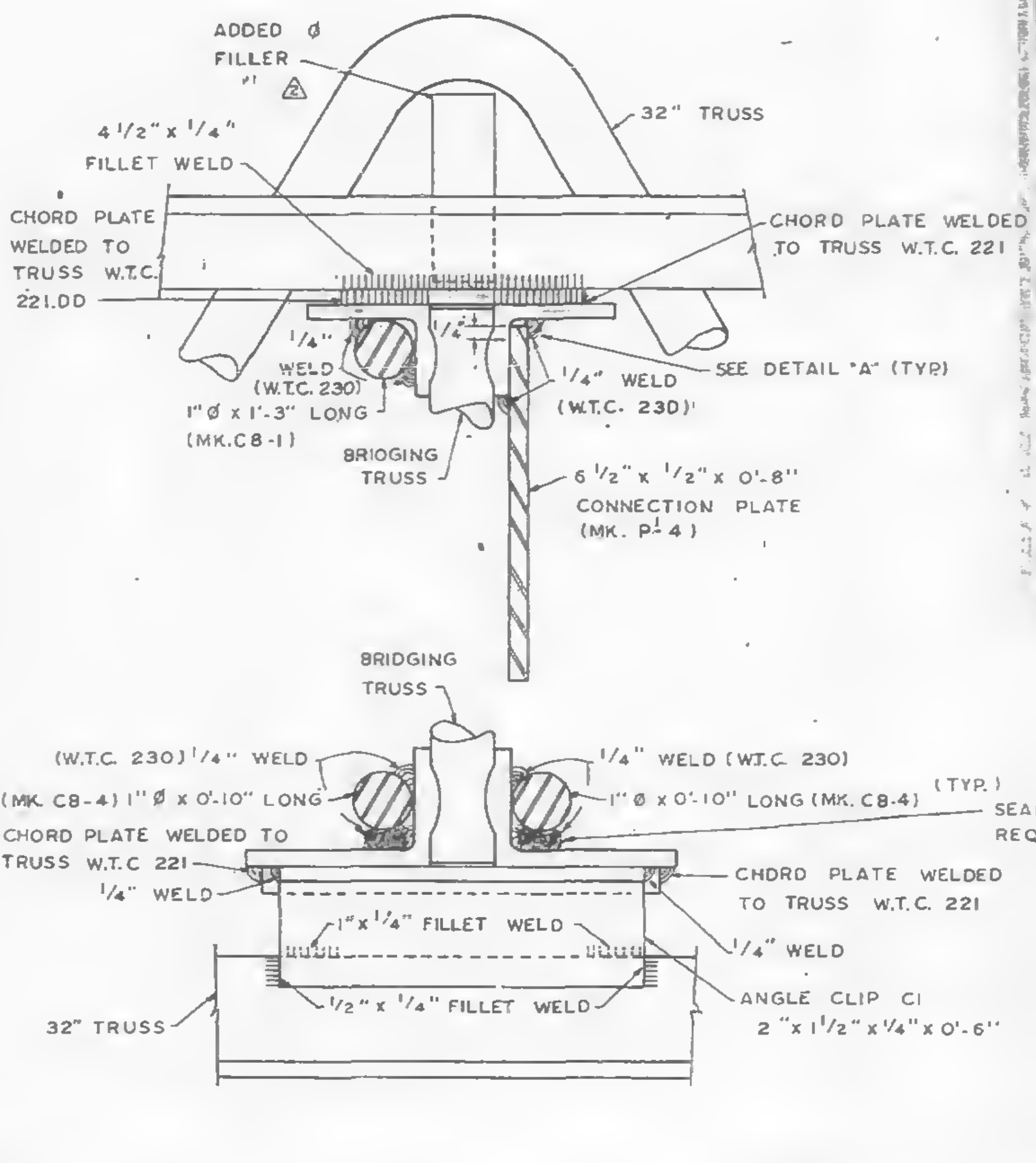
7-A84-18	5-6-68
7-A84-18.1	5-6-68


ADDED ϕ FILLER △
32" TRUSS
2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 230)
1/4" WELD (W.T.C. 230)
1" ϕ x 1'-3" LONG (MK. CB-1)
BRIDGING TRUSS
6 1/2"x 1/2" x 0'-8" CONNECTION PLATE MK. P-4)
(TYP.) BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
1/4" WELD (W.T.C. 230)
(CB-4) 1" ϕ x 0'-10" LONG
1" ϕ x 0'-10" LONG (MK. CB-4)
CHORD PLATE WELDED TO TRUSS W.T.C. 221
CHORD PLATE WELDED TO TRUSS (W.T.C. 221)
1/4" WELD
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2"x 1 1/2"x 1/4" ANGLE CLIP MK. C2 x 0'-6"
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G-G △


G
G1
32" TRUSS
32" TRUSS
7 1/2"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
2 3/8"
1" ϕ x 1'-3" LONG (MK. CB-1)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1"
1"
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2"x 1/2"x 0'-8" CONNECTION PLATE (MK. P-4)
24"
24"
4" x 1/4" FILLET WELD (W.T.C. 230)
BRIDGING TRUSS
4" x 1/4" FILLET WELD (W.T.C. 230)
CHORD PLATE WELDED TO TRUSS W.T.C. 221.DD
1/4" WELD
1 1/2" x 1/4"
FILLET WELD
1/4" WELD
ANGLE CLIP C2
ANGLE CLIP C1
1" ϕ x 0'-10" LONG (MK. CB-4)
32 TRUSS
G
G1

△ 8-C CONNECTION DETAIL PANEL JOINT (24T8 TO 24T10, 24T8A TO 24T10A, 24T8B TO 24T10B)


ADDED ϕ FILLER △
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221.DD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 230)
1/4" WELD (W.T.C. 230)
1" ϕ x 1'-3" LONG (MK. CB-1)
SEE DETAIL "A" (TYP.)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
1/4" WELD (W.T.C. 230)
(MK. CB-4) 1" ϕ x 0'-10" LONG
1" ϕ x 0'-10" LONG (MK. CB-4)
(TYP.)
SEAL PASS OR PASSES PLUS REQUIRED FILLET WELD. SEE DETAIL "B"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
1/4" WELD
1/2" x 1/4" FILLET WELD
ANGLE CLIP C1 2" x 1 1/2" x 1/4" x 0'-6"
32" TRUSS

△ SECTION G1 - G1

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. △2 ALL PLATES & ϕ SPLICE BARS TO BE ASTM A36

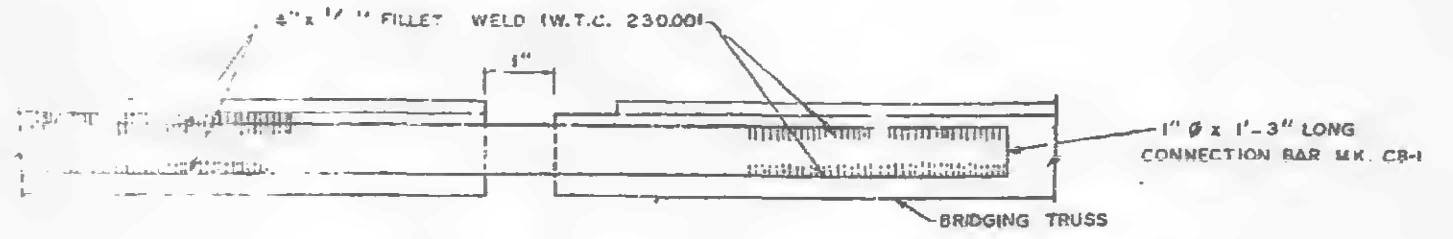
NO.	DATE	REVISION	BY
△2	6-24-68	AS NOTED	L.W.H
△1	5-20-68	WELD CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

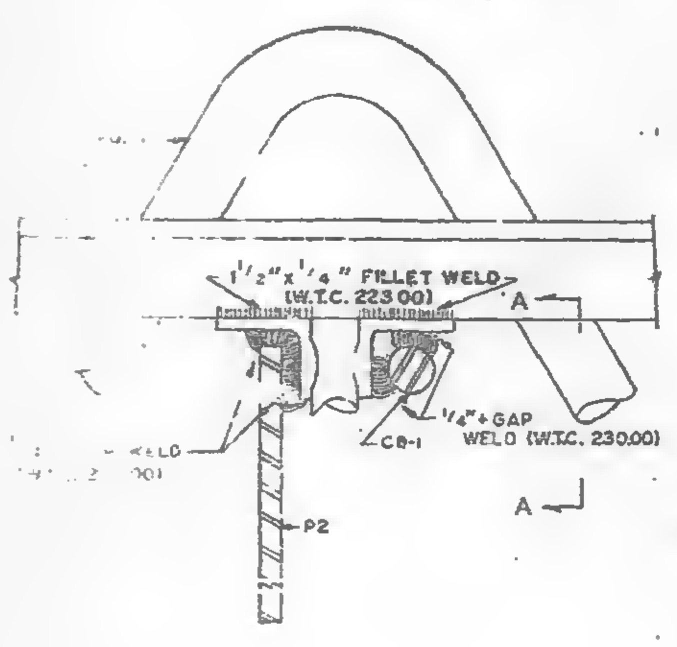
STANDARD CONNECTION DETAILS 8C, 10-C

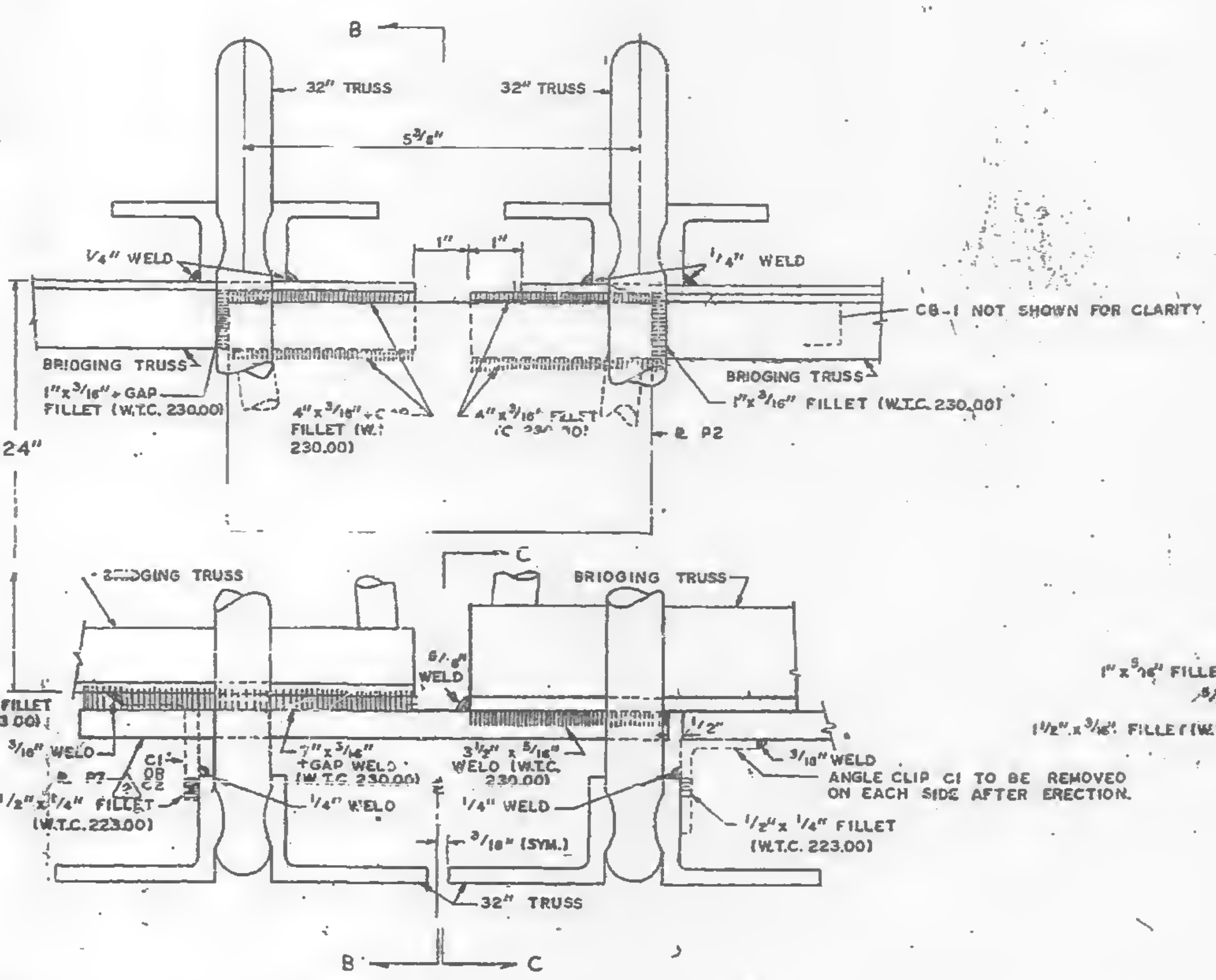
FABRICATION BY: LACLEDE STEEL COMPANY

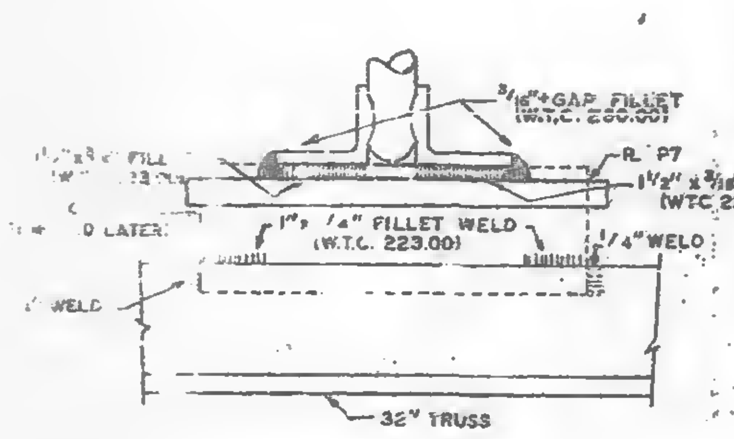
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. PLATE	
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A	DATE.	DRAWN BY: DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY. A.C. WEBER		FABRICATION CONT. NO W.T.C 221	SHEET NO. CD 202


4"x1/4" FILLET WELD (W.T.C. 230.00)
1"
1" Ø x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

SECTION A-A

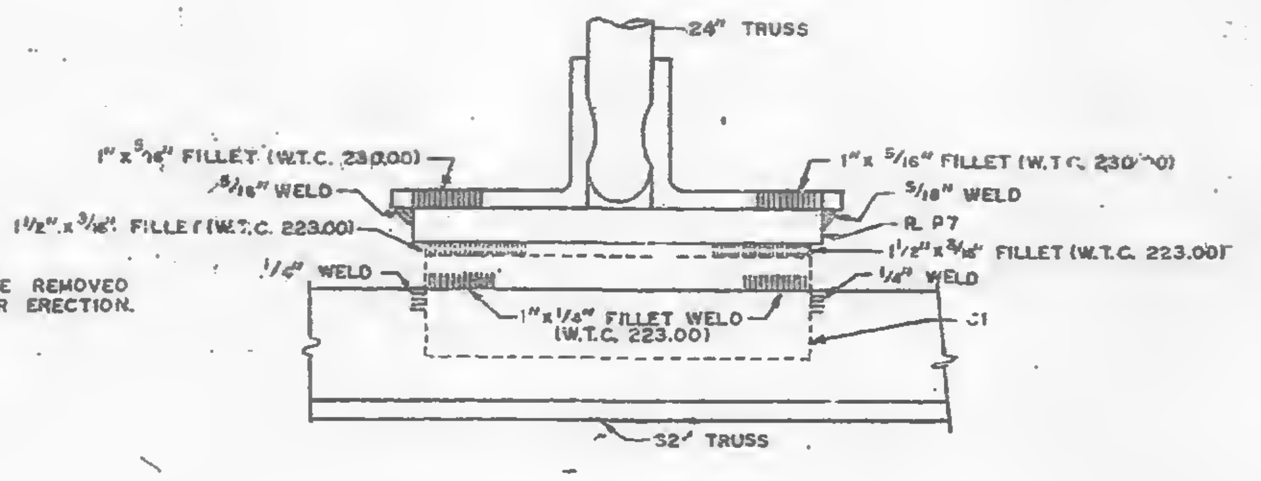

1½"x1/4" FILLET WELD (W.T.C. 223.00)
A
¼"+GAP WELD (W.T.C. 230.00)
CB-1
A
P2


B
32" TRUSS
32" TRUSS
5⅜"
1"
1"
¼" WELD
¼" WELD
CB-1 NOT SHOWN FOR CLARITY
BRIDGING TRUSS
1"x3/16"+GAP FILLET (W.T.C. 230.00)
4"x3/16"+GAP FILLET (W.T.C. 230.00)
4"x3/16" FILLET (W.T.C. 230.00)
BRIDGING TRUSS
1"x3/16" FILLET (W.T.C. 230.00)
℄ P2
24"
BRIDGING TRUSS
C
BRIDGING TRUSS
5/16" WELD
3/16" WELD
℄ P7
C1 OR C2
2
½"x¼" FILLET (W.T.C. 223.00)
7"x3/16" +GAP WELD (W.T.C. 230.00)
¼" WELD
3½" x 5/16" WELD (W.T.C. 230.00)
¼" WELD
3/16" (SYM.)
½"
3/16" WELD
ANGLE CLIP C1 TO BE REMOVED ON EACH SIDE AFTER ERECTION.
½"x¼" FILLET (W.T.C. 223.00)
32" TRUSS
B
C


3/16"+GAP FILLET (W.T.C. 230.00)
℄ P7
1½" x 3/16" FILLET (W.T.C. 223.00)
1" x ¼" FILLET WELD (W.T.C. 223.00)
¼" WELD
32" TRUSS

SECTION B-B

(9-C) PANEL JOINT BRIDGING TRUSS CONNECTION


24" TRUSS
1"x5/16" FILLET (W.T.C. 230.00)
5/16" WELD
1½"x3/16" FILLET (W.T.C. 223.00)
¼" WELD
1"x5/16" FILLET (W.T.C. 230.00)
5/16" WELD
℄ P7
1½"x3/16" FILLET (W.T.C. 223.00)
¼" WELD
1"x¼" FILLET WELD (W.T.C. 223.00)
C1
32" TRUSS

SECTION C-C

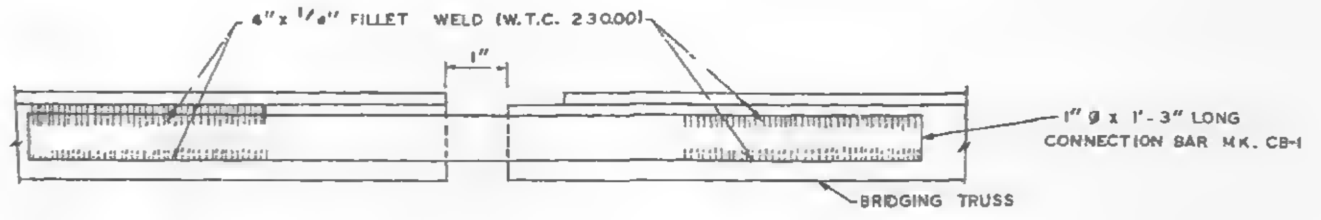
FOR NOTES SEE SHEET CD 201.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER · N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

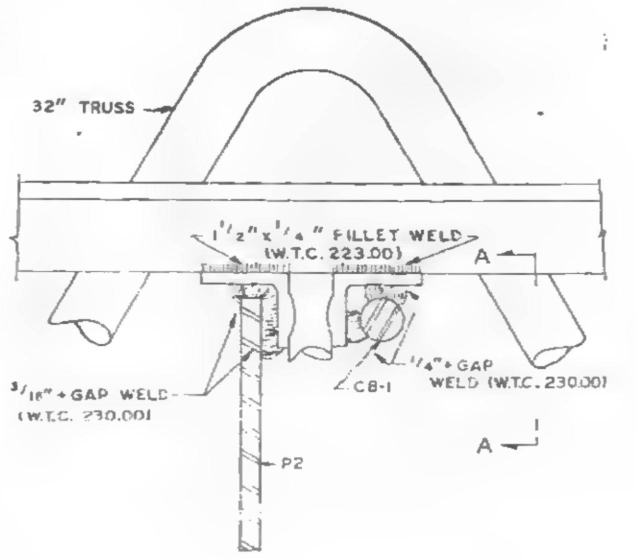
CONNECTION DETAIL 9C

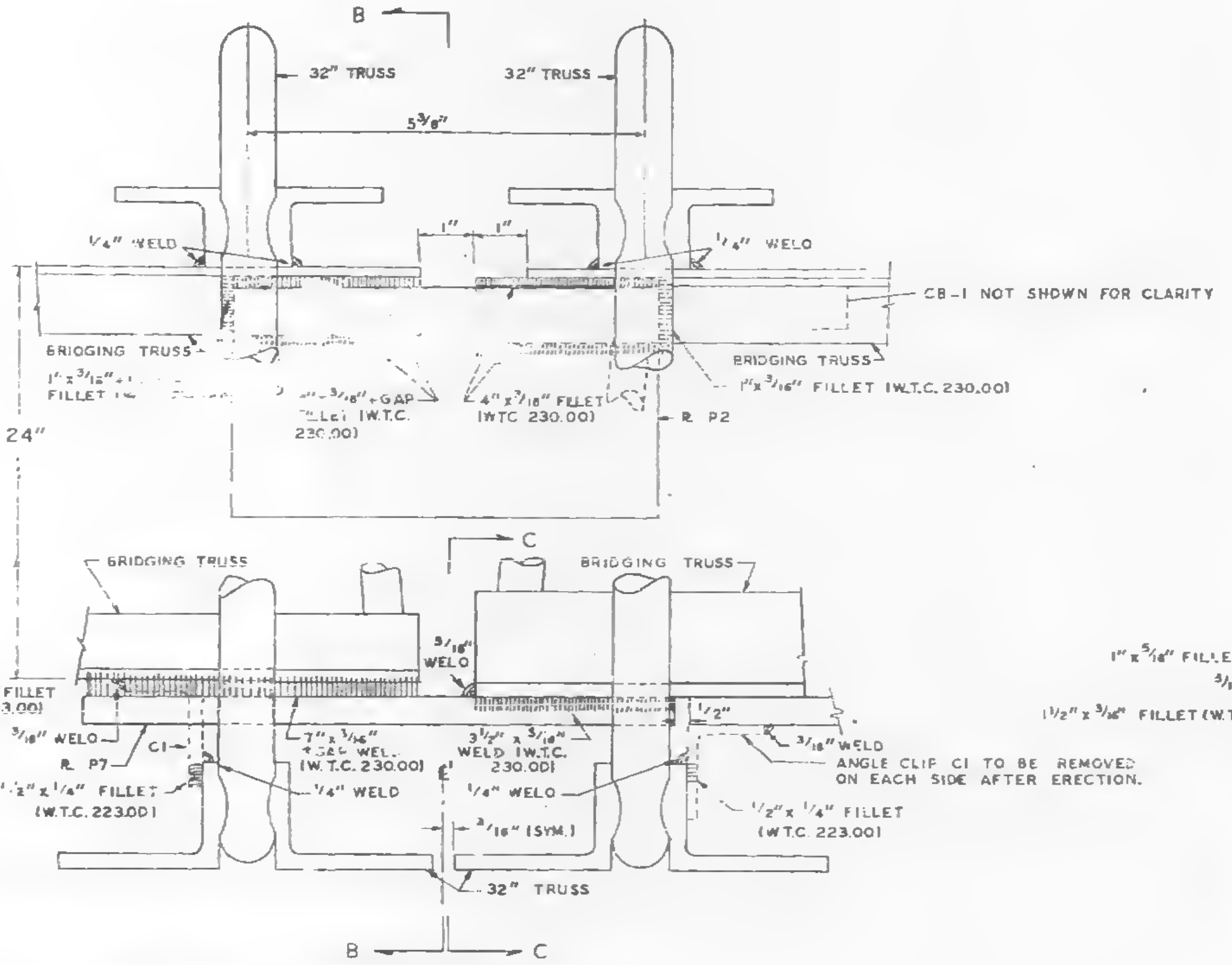
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A.
DATE 4/10/69
DRAWN BY: C.G.
DATE: AUG. 14, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR
LACLEDE STEEL CO.
CHECKED
DATE: AUG. 14, 1968
DETAILED BY A.C. WEBER
CD 03

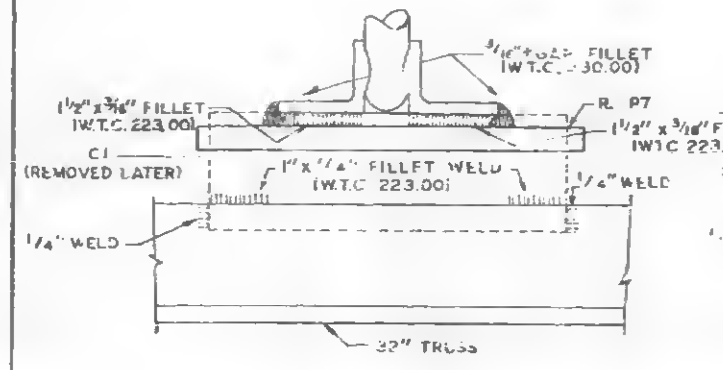
NO.	DATE	REVISION	BY
2	1-8-68	AS NOTED	G.D.Z.
1	9-3-68	GENERAL	G.D.Z.


4" x 1/4" FILLET WELD (W.T.C. 230.00)
1"
1" ∅ x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

SECTION A-A

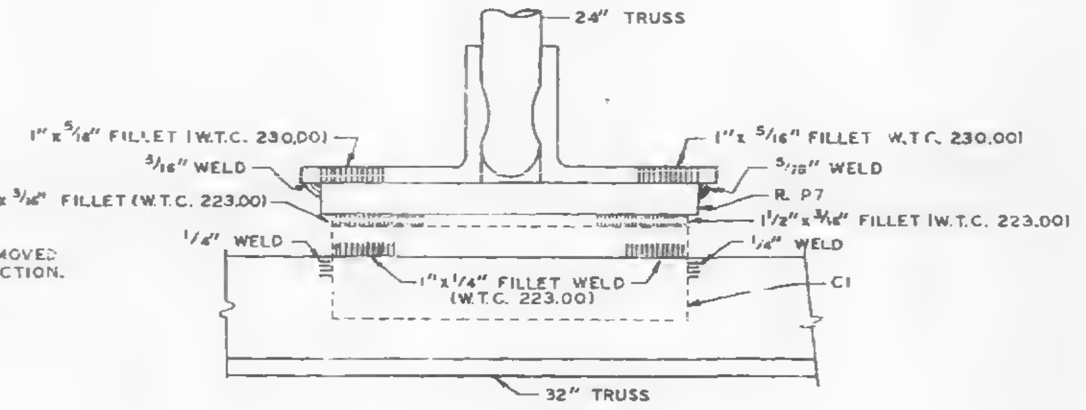

32" TRUSS
1 1/2" x 1/4" FILLET WELD (W.T.C. 223.00)
A
3/16" + GAP WELD (W.T.C. 230.00)
1/4" + GAP WELD (W.T.C. 230.00)
CB-1
A
P2


B
32" TRUSS
32" TRUSS
5 3/8"
1"
1"
1/4" WELD
1/4" WELD
CB-1 NOT SHOWN FOR CLARITY
BRIDGING TRUSS
1" x 3/16" + FILLET
3/16" + GAP FILLET (W.T.C. 230.00)
4" x 3/16" FILLET (WTC 230.00)
BRIDGING TRUSS
1" x 3/16" FILLET (W.T.C. 230.00)
R. P2
24"
C
BRIDGING TRUSS
BRIDGING TRUSS
5/16" WELD
3/16" WELD
R. P7
C1
1/2" x 1/4" FILLET (W.T.C. 223.00)
7" x 3/16" + GAP WELD (W.T.C. 230.00)
1/4" WELD
3 1/2" x 5/16" WELD (W.T.C. 230.00)
1/4" WELD
1/2"
3/16" WELD
ANGLE CLIP C1 TO BE REMOVED ON EACH SIDE AFTER ERECTION.
1/2" x 1/4" FILLET (W.T.C. 223.00)
3/16" (SYM.)
℄
32" TRUSS
B
C


3/16" + GAP FILLET (W.T.C. 230.00)
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
R. P7
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
C1 (REMOVED LATER)
1" x 1/4" FILLET WELD (W.T.C. 223.00)
1/4" WELD
1/4" WELD
32" TRUSS

SECTION B-B

9-C PANEL JOINT BRIDGING TRUSS CONNECTION


24" TRUSS
1" x 5/16" FILLET (W.T.C. 230.00)
3/16" WELD
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
1/4" WELD
1" x 5/16" FILLET (W.T.C. 230.00)
5/16" WELD
R. P7
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
1/4" WELD
1" x 1/4" FILLET WELD (W.T.C. 223.00)
C1
32" TRUSS

SECTION C-C

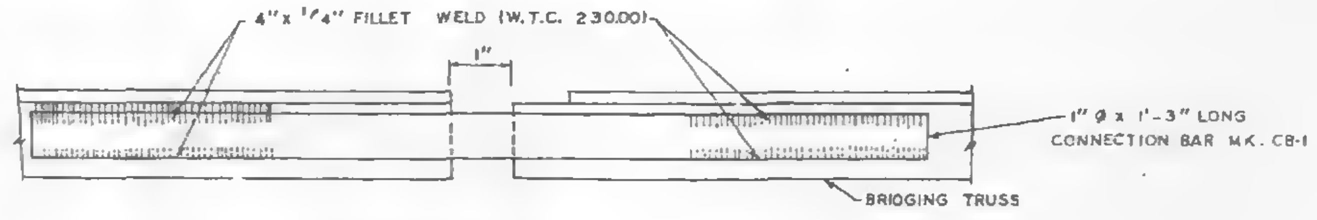
FOR NOTES SEE SHEET CD 201.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

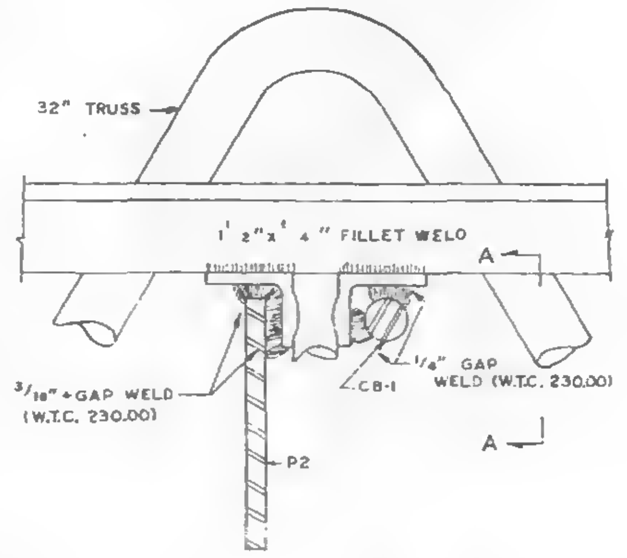
CONNECTION DETAIL 9C

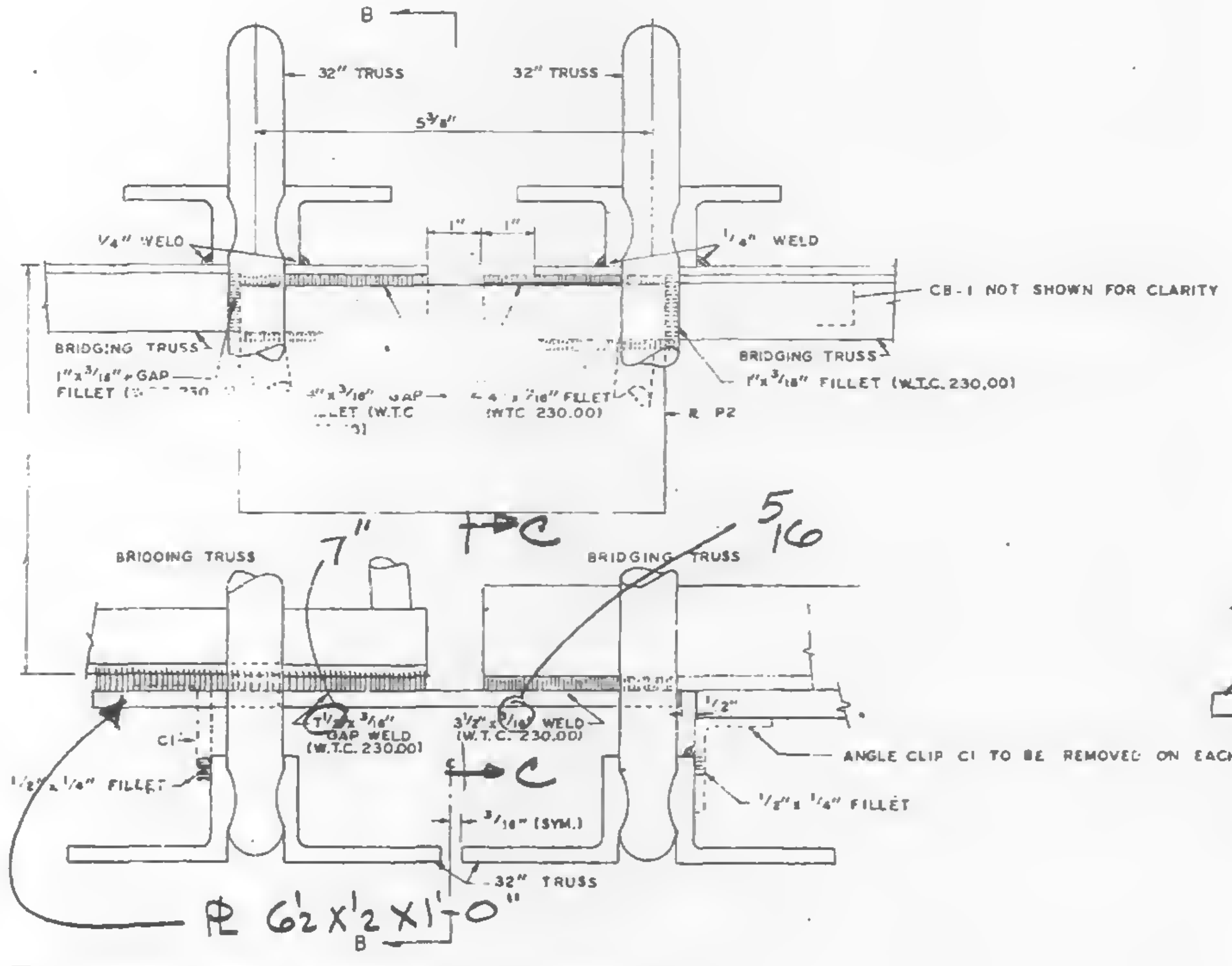
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO ____ PLATE ____
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A. DATE 9/19/68
DRAWN BY gdc DATE AUG. 14, 1968
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____
CHECKED BY T.M.CHURA DATE AUG. 14, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 203

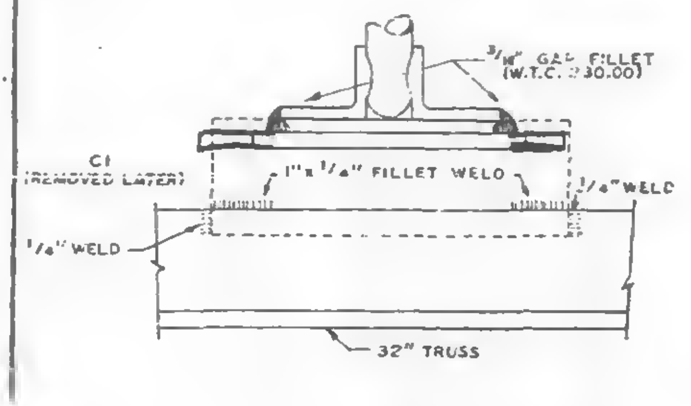
NO.	DATE	REVISION	BY
1	9-3-68	GENERAL	G.D.C.


4" x 1/4" FILLET WELD (W.T.C. 230.00)
1"
1" Ø x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

SECTION A-A

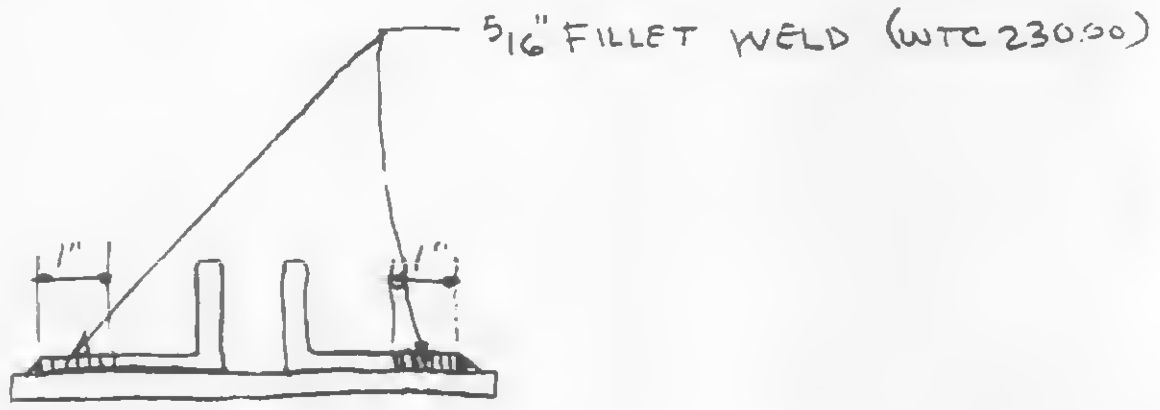

32" TRUSS
1 1/2" x 1/4" FILLET WELD
A
3/16" + GAP WELD (W.T.C. 230.00)
1/4" GAP WELD (W.T.C. 230.00)
CB-1
A
P2


B
32" TRUSS
32" TRUSS
5 3/8"
1/4" WELD
1"
1"
1/4" WELD
CB-1 NOT SHOWN FOR CLARITY
BRIDGING TRUSS
1" x 3/16" + GAP FILLET
4" x 3/16" GAP FILLET (W.T.C
4" x 7/16" FILLET (WTC 230.00)
BRIDGING TRUSS
1" x 3/16" FILLET (W.T.C. 230.00)
P2
7"
C
5/16
BRIDGING TRUSS
BRIDGING TRUSS
1 1/2" x 3/16" GAP WELD (W.T.C. 230.00)
3 1/2" x 5/16" WELD (W.T.C. 230.00)
1/2"
C1
1/2" x 1/4" FILLET
C
3/16" (SYM.)
1/2" x 1/4" FILLET
32" TRUSS
ANGLE CLIP C1 TO BE REMOVED ON EACH SIDE AFTER ERECTION
PL 6 1/2 X 1/2 X 1'-0"
B



SECTION B-B

9-C PANEL JOINT BRIDGING TRUSS CONNECTION



Section C-C

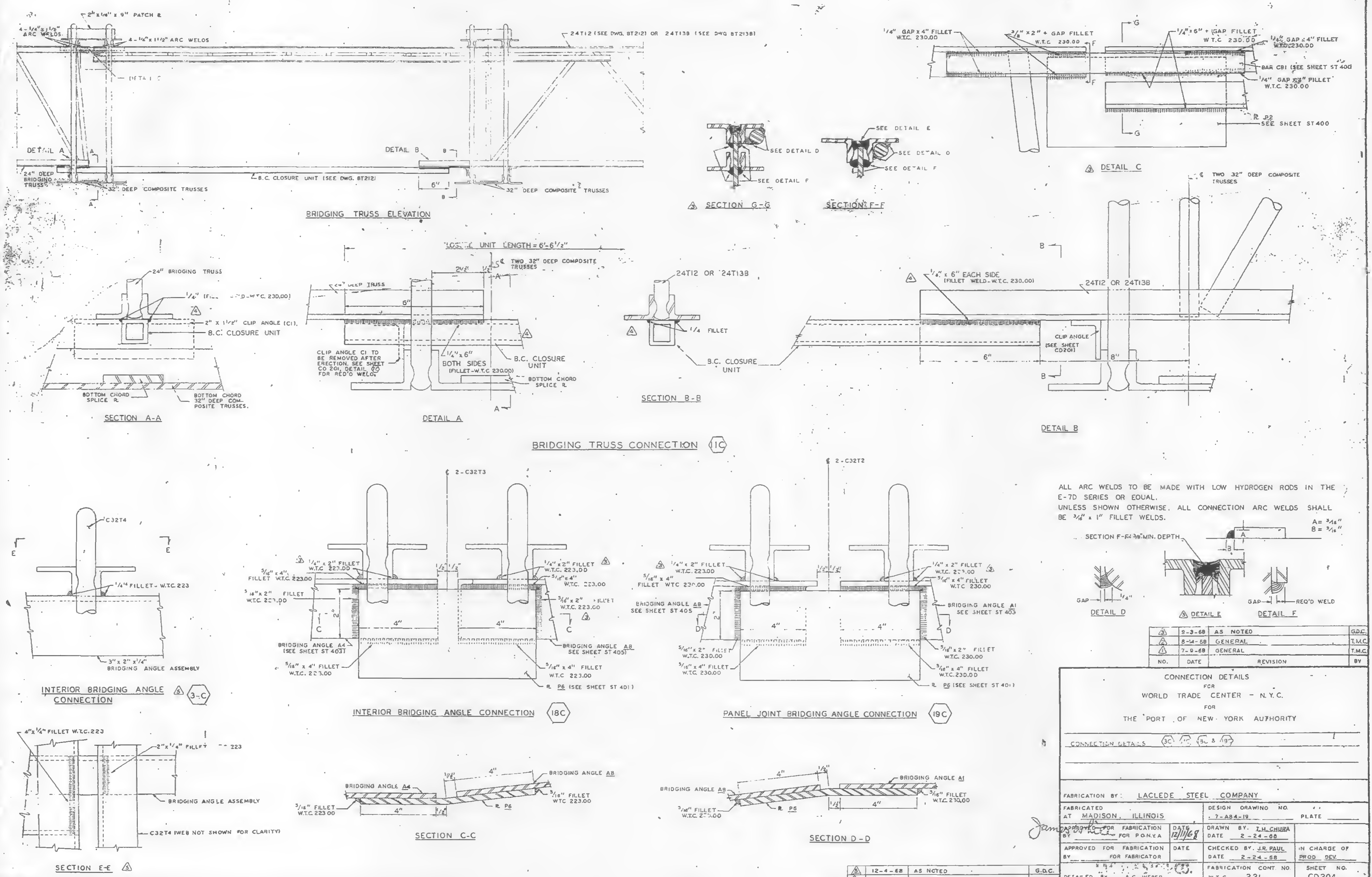
FOR NOTES SEE SHEET CD 201.

8/29/68 SK

CONNECTION DETAILS
N.Y.C.
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 9C

FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY DATE AUG. 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE AUG. 14, 1968	IN CHARGE OF PROD DEV
DETAILED BY A C WEBER		FABRICATION CONT NO WTC 221	SHEET NO. CD 203


BRIDGING TRUSS ELEVATION
2"x1/4" x 9" PATCH ℞
4-1/4"x1 1/2" ARC WELDS
4-1/4"x1 1/2" ARC WELDS
24T12 (SEE DWG. BT212) OR 24T13B (SEE DWG BT213B)
DETAIL C
DETAIL A
DETAIL B
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG. BT212)
6"
SECTION G-G
SECTION F-F
SEE DETAIL D
SEE DETAIL E
SEE DETAIL F
1/4" GAP x 4" FILLET W.T.C. 230.00
3/8" x 2" + GAP FILLET W.T.C. 230.00
1/4" x 6" + GAP FILLET W.T.C. 230.00
1/4" GAP x 4" FILLET W.T.C. 230.00
BAR CB1 (SEE SHEET ST 400)
1/4" GAP x 2" FILLET W.T.C. 230.00
℞ P2 SEE SHEET ST400
TWO 32" DEEP COMPOSITE TRUSSES
CLOSURE UNIT LENGTH = 6'-6 1/2"
SECTION A-A
24" BRIDGING TRUSS
2" x 1 1/2" CLIP ANGLE (C1)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES.
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CD 201, DETAIL 00 FOR REQ'D WELD.
1/4" x 6" BOTH SIDES (FILLET-W.T.C. 230.00)
SECTION B-B
24T12 OR 24T13B
1/4 FILLET
1/4" x 6" EACH SIDE (FILLET WELD-W.T.C. 230.00)
CLIP ANGLE (SEE SHEET CD201)
8"
BRIDGING TRUSS CONNECTION 1C
INTERIOR BRIDGING ANGLE CONNECTION 3-C
C32T4
1/4" FILLET-W.T.C. 223
3" x 2" x 1/4" BRIDGING ANGLE ASSEMBLY
SECTION E-E
4"x1/4" FILLET W.T.C. 223
2"x1/4" FILLET W.T.C. 223
BRIDGING ANGLE ASSEMBLY
C32T4 (WEB NOT SHOWN FOR CLARITY)
INTERIOR BRIDGING ANGLE CONNECTION 18C
℄ 2-C32T3
1/4" x 2" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 223.00
5/16" x 2" FILLET W.T.C. 223.00
BRIDGING ANGLE A4 (SEE SHEET ST 403)
BRIDGING ANGLE A8 SEE SHEET ST 405
℞ P6 (SEE SHEET ST 401)
PANEL JOINT BRIDGING ANGLE CONNECTION 19C
℄ 2-C32T2
BRIDGING ANGLE A8 SEE SHEET ST 405
BRIDGING ANGLE A1 SEE SHEET ST 403
5/16" x 4" FILLET W.T.C. 230.00
5/16" x 2" FILLET W.T.C. 230.00
SECTION C-C
SECTION D-D
4"
1/2"
DETAIL D
DETAIL E
DETAIL F
GAP
REQ'D WELD
SECTION F-F 3/8" MIN. DEPTH
A = 3/16"
B = 3/16"

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.

NO.	DATE	REVISION	BY
5	12-4-68	AS NOTED	G.D.C.
4	11-13-68	CLOSURE UNIT AS NOTED	L.W.H.

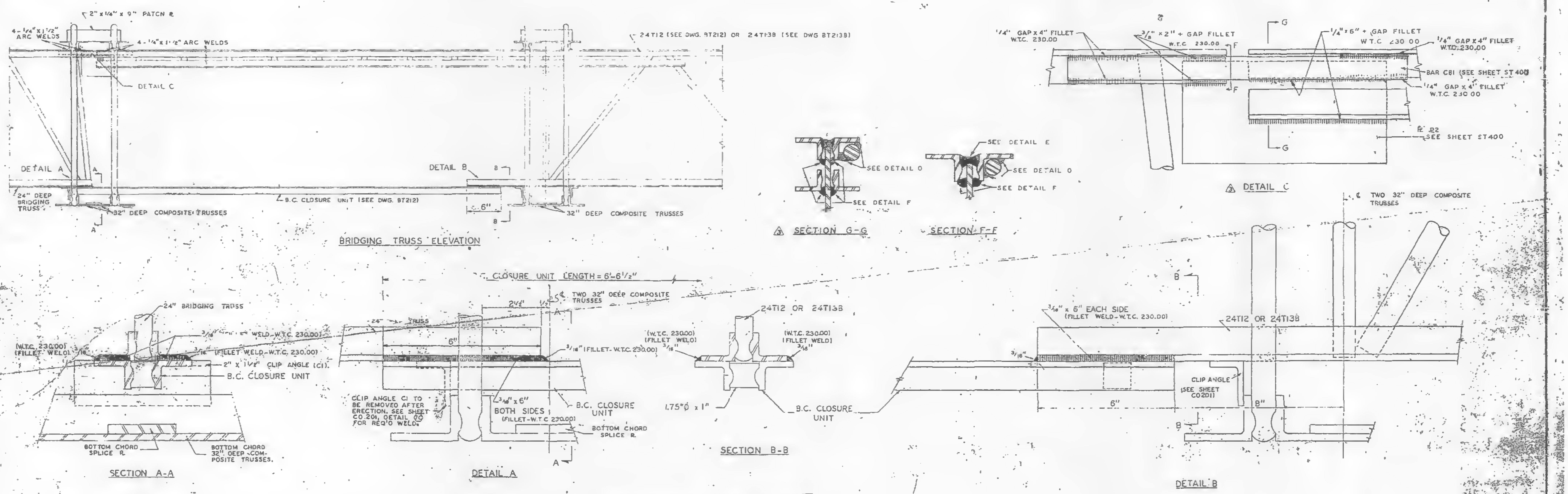
NO.	DATE	REVISION	BY
3	9-3-68	AS NOTED	G.D.C.
2	8-14-68	GENERAL	T.M.C.
1	7-9-68	GENERAL	T.M.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

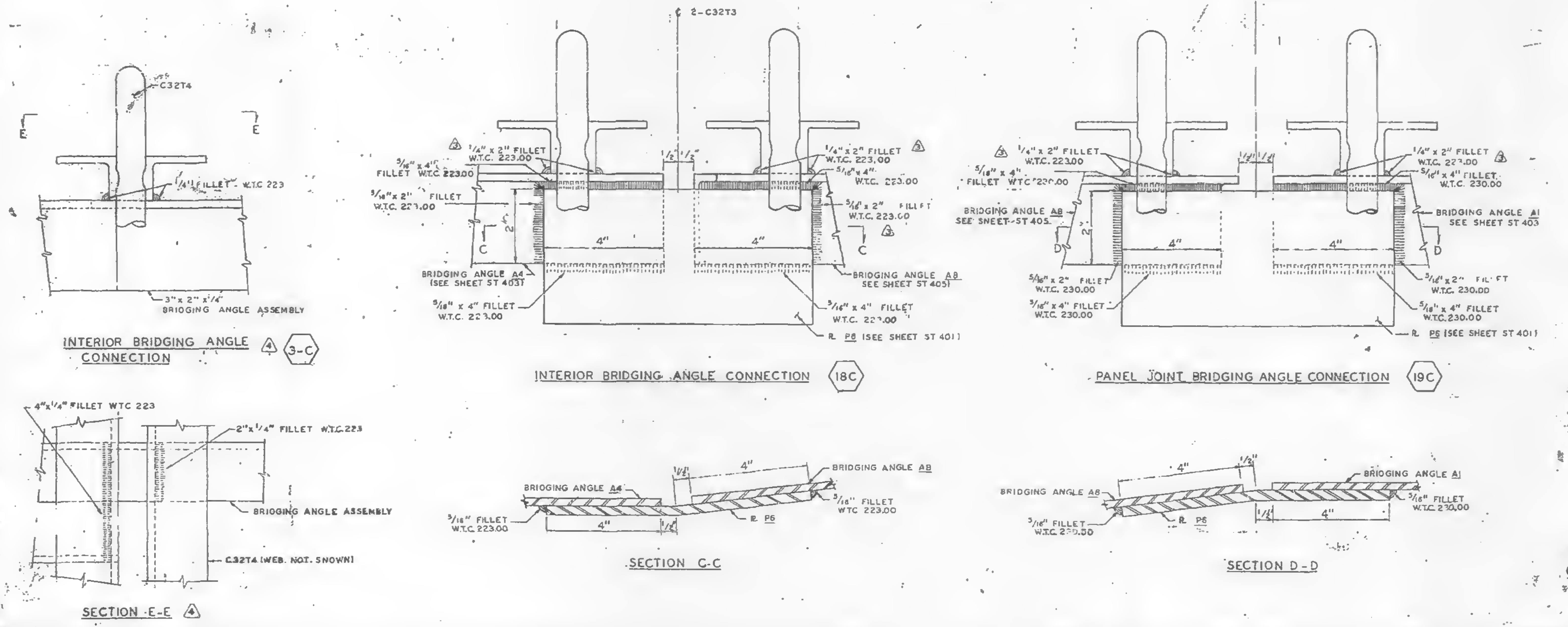
CONNECTION DETAILS 3C 1C 18C & 19C

FABRICATION BY: LACLEDE STEEL COMPANY

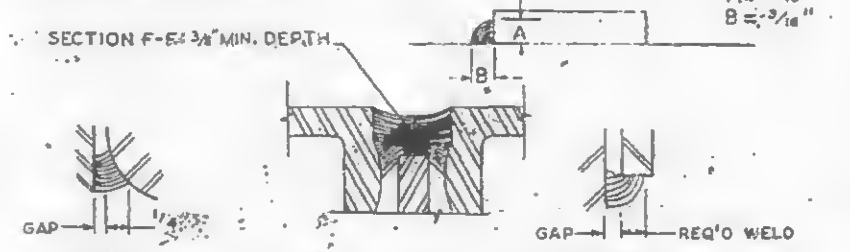
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-19 PLATE	
APPROVED FOR FABRICATION BY James W. ... FOR P.O.N.Y.A	DATE 12/11/68	DRAWN BY. T.H. CHURA DATE 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY. J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY A C WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD204


2" x 1/4" x 9" PATCH ℞
4 - 1/4" x 1 1/2" ARC WELDS
4 - 1/4" x 1 1/2" ARC WELDS
DETAIL C
24T12 (SEE DWG. BT212) OR 24T138 (SEE DWG BT2138)
DETAIL A
A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
DETAIL B
B
B.C. CLOSURE UNIT (SEE DWG. BT212)
6"
32" DEEP COMPOSITE TRUSSES
BRIDGING TRUSS ELEVATION
SEE DETAIL D
SEE DETAIL F
③ SECTION G-G
SEE DETAIL E
SEE DETAIL D
SEE DETAIL F
SECTION F-F
1/4" GAP x 4" FILLET W.T.C. 230.00
3/8" x 2" + GAP FILLET W.T.C. 230.00
F
G
1/4" x 6" + GAP FILLET W.T.C. 230.00
1/4" GAP x 4" FILLET W.T.C. 230.00
BAR C81 (SEE SHEET ST400)
1/4" GAP x 4" FILLET W.T.C. 230.00
℞ 22 SEE SHEET ST400
③ DETAIL C
24" BRIDGING TRUSS
(W.T.C. 230.00) (FILLET WELD) 3/16"
3/16" FILLET WELD-W.T.C. 230.00
3/16" (FILLET WELD-W.T.C. 230.00)
2" x 1 1/2" CLIP ANGLE (C1)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES.
SECTION A-A
B.C. CLOSURE UNIT LENGTH = 6'-6 1/2"
℄ TWO 32" DEEP COMPOSITE TRUSSES
2 1/2"
1/2"
24" TRUSS
6"
3/16" (FILLET-W.T.C. 230.00)
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CO.201, DETAIL 7C FOR REQ'D WELD.
3/16" x 6" BOTH SIDES (FILLET-W.T.C. 230.00)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
DETAIL A
24T12 OR 24T138
(W.T.C. 230.00) (FILLET WELD) 3/16"
(W.T.C. 230.00) (FILLET WELD) 3/16"
1.75"Ø x 1"
B.C. CLOSURE UNIT
SECTION B-B
℄ TWO 32" DEEP COMPOSITE TRUSSES
3/16" x 6" EACH SIDE (FILLET WELD-W.T.C. 230.00)
24T12 OR 24T138
3/16"
CLIP ANGLE (SEE SHEET CO201)
6"
8"
B.C. CLOSURE UNIT
DETAIL B

BRIDGING TRUSS CONNECTION (1C)


C32T4
E
1/4" FILLET - W.T.C 223
3" x 2" x 1/4" BRIDGING ANGLE ASSEMBLY
INTERIOR BRIDGING ANGLE CONNECTION ④ 3-C
℄ 2-C32T3
③ 1/4" x 2" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 223.00
5/16" x 2" FILLET W.T.C. 223.00
1/2" 1/2"
1/4" x 2" FILLET W.T.C. 223.00 ③
5/16" x 4" W.T.C. 223.00
5/16" x 2" FILLET W.T.C. 223.00 ③
2"
C
4"
4"
BRIDGING ANGLE A4 (SEE SHEET ST 403)
BRIDGING ANGLE A8 SEE SHEET ST 405)
5/16" x 4" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 223.00
℞ P8 (SEE SHEET ST 401)
INTERIOR BRIDGING ANGLE CONNECTION 18C
℄ 2-C32T2
③ 1/4" x 2" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A8 SEE SHEET ST 405.
1/2" 1/2"
1/4" x 2" FILLET W.T.C. 223.00 ③
5/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A1 SEE SHEET ST 403
D
2"
4"
4"
5/16" x 2" FILLET W.T.C. 230.00
5/16" x 4" FILLET W.T.C. 230.00
5/16" x 2" FILLET W.T.C. 230.00
5/16" x 4" FILLET W.T.C. 230.00
℞ P6 (SEE SHEET ST 401)
PANEL JOINT BRIDGING ANGLE CONNECTION 19C
4" x 1/4" FILLET WTC 223
2" x 1/4" FILLET W.T.C. 223
BRIDGING ANGLE ASSEMBLY
C32T4 (WEB. NOT. SHOWN)
SECTION E-E ④
BRIDGING ANGLE A4
1/2"
4"
BRIDGING ANGLE A8
5/16" FILLET W.T.C. 223.00
5/16" FILLET WTC 223.00
℞ P6
4"
1/2"
SECTION C-C
BRIDGING ANGLE A8
4"
1/2"
BRIDGING ANGLE A1
5/16" FILLET W.T.C. 230.00
5/16" FILLET W.T.C. 230.00
℞ P6
1/2"
4"
SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE. ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.

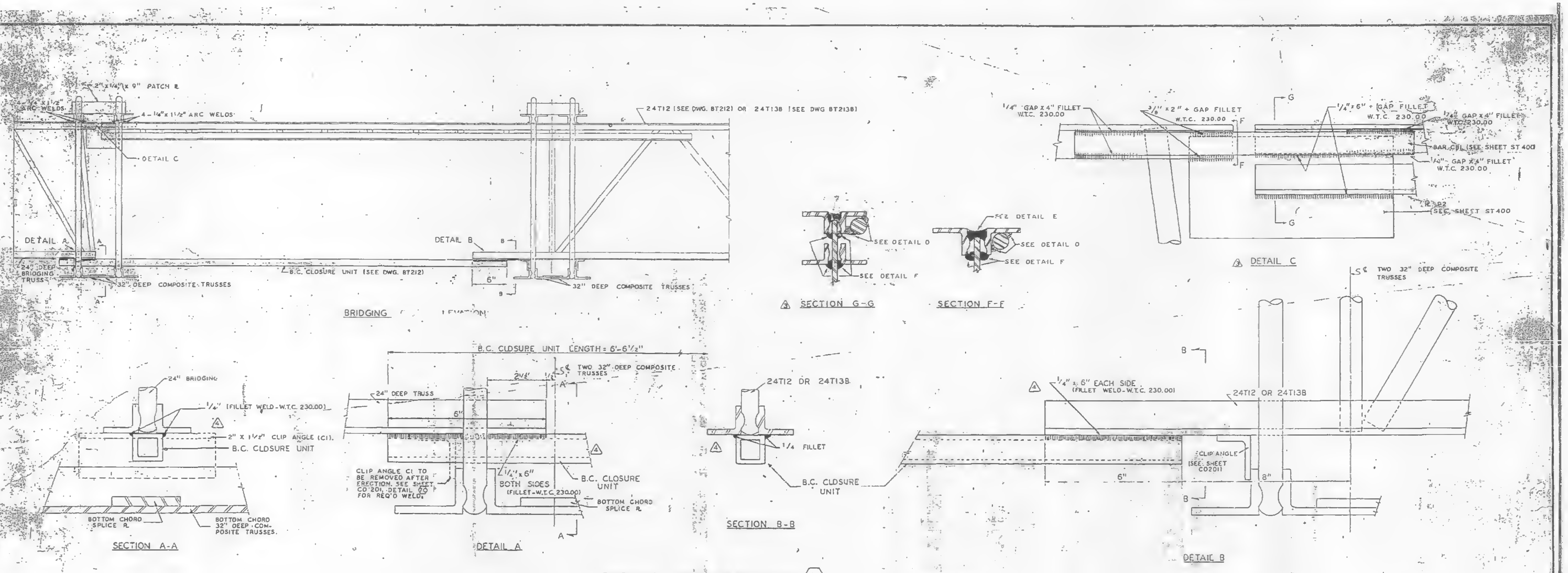


NO.	DATE	REVISION	BY
④	12-3-68	AS NOTED	G.D.C.
③	9-3-68	AS NOTED	G.D.C.
②	8-14-68	GENERAL	T.M.C.
①	7-9-68	GENERAL	T.M.C.

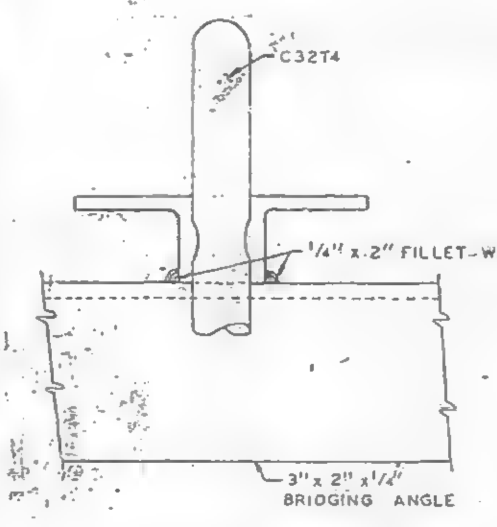
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS (3C) (1C) (18C & (19C)

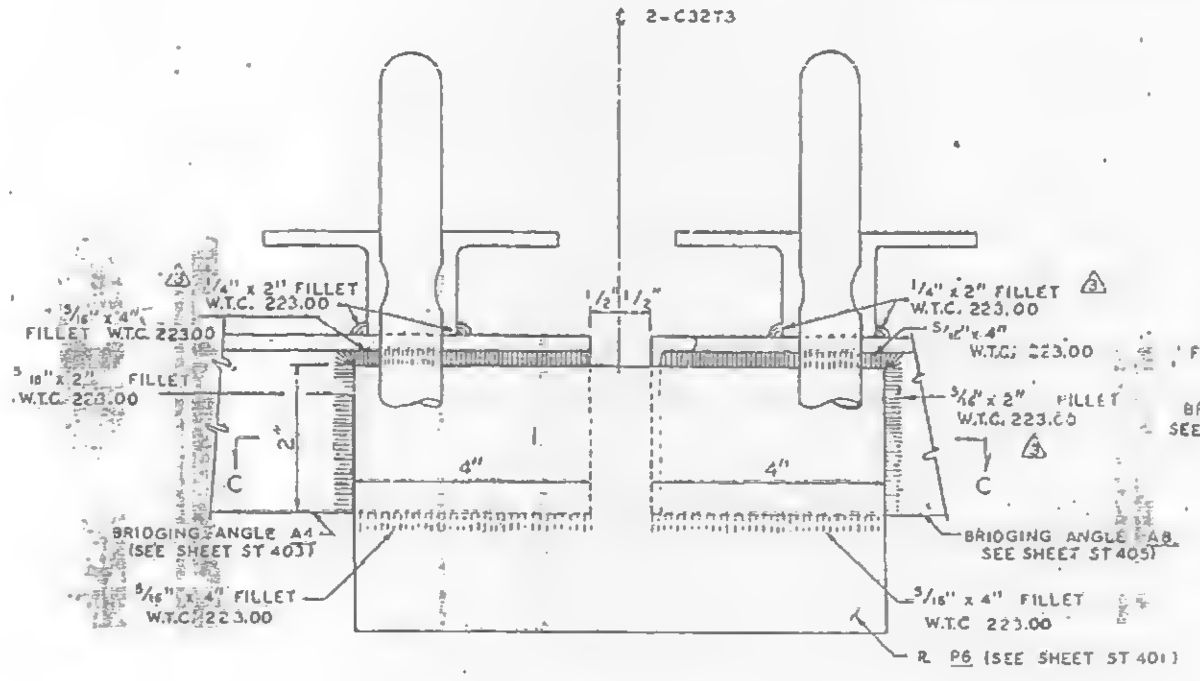
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT. MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A84-19
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE 12/9/68
DRAWN BY T.M. CHURA DATE 2-24-68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY. J.R. PAUL DATE 2-24-68
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO W.T.C 221
SHEET NO. CD204


2"x1/4"x 9" PATCH R
2"x1 1/2" ARC WELDS
4-1/4"x 1 1/2" ARC WELDS
DETAIL C
24T12 (SEE DWG. BT212) OR 24T138 (SEE DWG BT213B)
DETAIL A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG. BT212)
DETAIL B
6"
32" DEEP COMPOSITE TRUSSES
BRIDGING ELEVATION
SEE DETAIL D
SEE DETAIL F
SECTION G-G
FC2 DETAIL E
SEE DETAIL D
SEE DETAIL F
SECTION F-F
1/4" GAP x 4" FILLET W.T.C. 230.00
3/16" x 2" + GAP FILLET W.T.C. 230.00
1/4"x 6" + GAP FILLET W.T.C. 230.00
1/4" GAP x 4" FILLET W.T.C. 230.00
BAR C51 (SEE SHEET ST 400)
1/4" GAP x 4" FILLET W.T.C. 230.00
R B2 (SEE SHEET ST 400)
DETAIL C
24" BRIDGING
1/4" (FILLET WELD-W.T.C. 230.00)
2" x 1 1/2" CLIP ANGLE (C1)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE R
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES
SECTION A-A
B.C. CLOSURE UNIT LENGTH = 6'-6 1/2"
TWO 32" DEEP COMPOSITE TRUSSES
24" DEEP TRUSS
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CD 201, DETAIL 60 FOR REQ'D WELD
1/4"x 6" BOTH SIDES (FILLET-W.T.C. 230.00)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE R
DETAIL A
24T12 OR 24T138
1/4 FILLET
B.C. CLOSURE UNIT
SECTION B-B
1/4" x 6" EACH SIDE (FILLET WELD-W.T.C. 230.00)
24T12 OR 24T138
TWO 32" DEEP COMPOSITE TRUSSES
CLIP ANGLE (SEE SHEET CD201)
6"
8"
DETAIL B

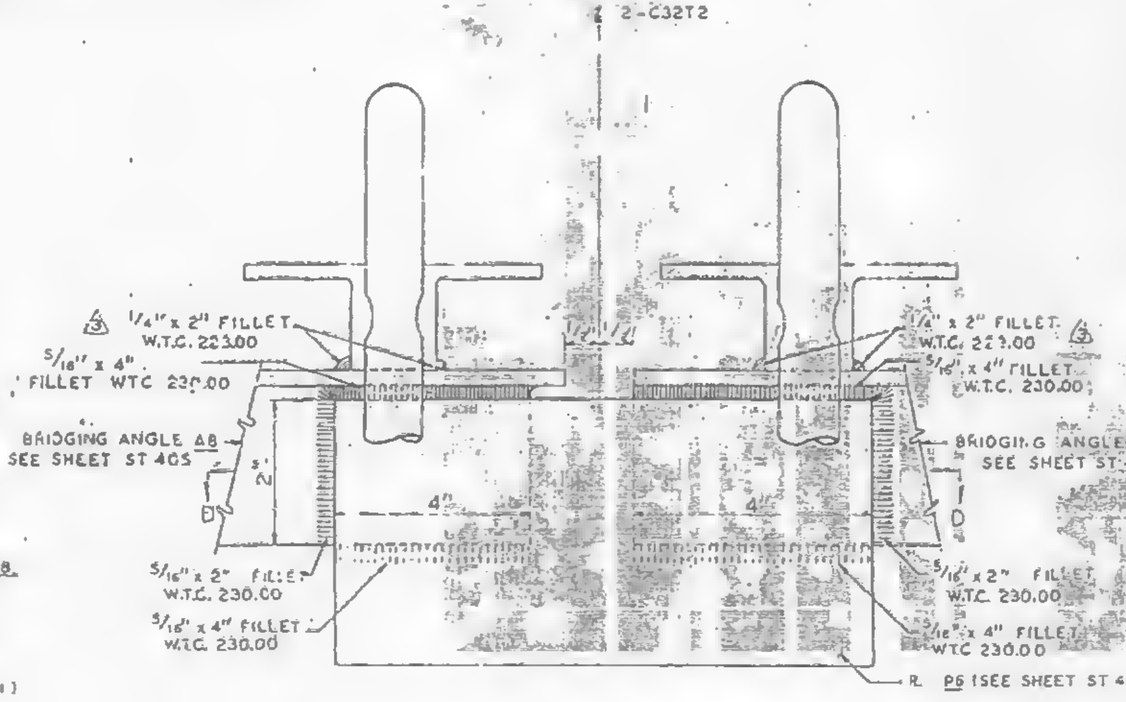
BRIDGING TRUSS CONNECTION (1C)



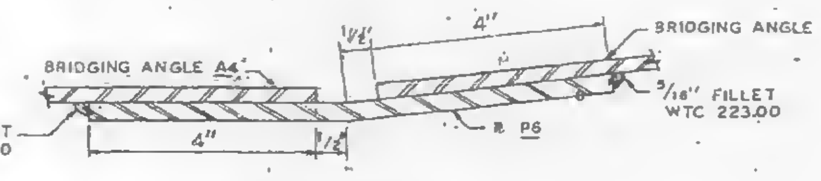
INTERIOR BRIDGING ANGLE CONNECTION (3-C)


2-C32T3
3/16" x 4" FILLET W.T.C. 223.00
1/4" x 2" FILLET W.T.C. 223.00
3/16" x 2" FILLET W.T.C. 223.00
1 1/2"
1/4" x 2" FILLET W.T.C. 223.00
3/16" x 4" W.T.C. 223.00
3/16" x 2" FILLET W.T.C. 223.00
C
C
4"
4"
BRIDGING ANGLE A4 (SEE SHEET ST 403)
3/16" x 4" FILLET W.T.C. 223.00
BRIDGING ANGLE A8 SEE SHEET ST 405
3/16" x 4" FILLET W.T.C. 223.00
R P6 (SEE SHEET ST 401)

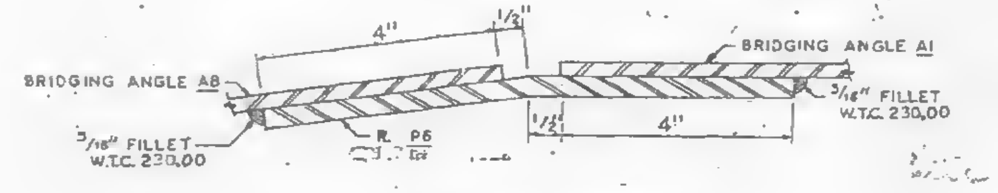
INTERIOR BRIDGING ANGLE CONNECTION (18C)


2-C32T2
1/4" x 2" FILLET W.T.C. 223.00
3/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A8 SEE SHEET ST 405
D
4"
3/16" x 2" FILLET W.T.C. 230.00
3/16" x 4" FILLET W.T.C. 230.00
1/4" x 2" FILLET W.T.C. 223.00
3/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A1 SEE SHEET ST 404
D
3/16" x 2" FILLET W.T.C. 230.00
3/16" x 4" FILLET W.T.C. 230.00
R P8 (SEE SHEET ST 401)

PANEL JOINT BRIDGING ANGLE CONNECTION (19C)

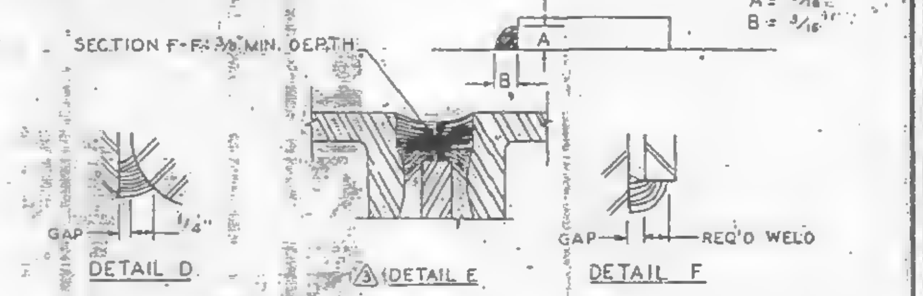


SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE. ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



DETAIL D

(3) DETAIL E

DETAIL F

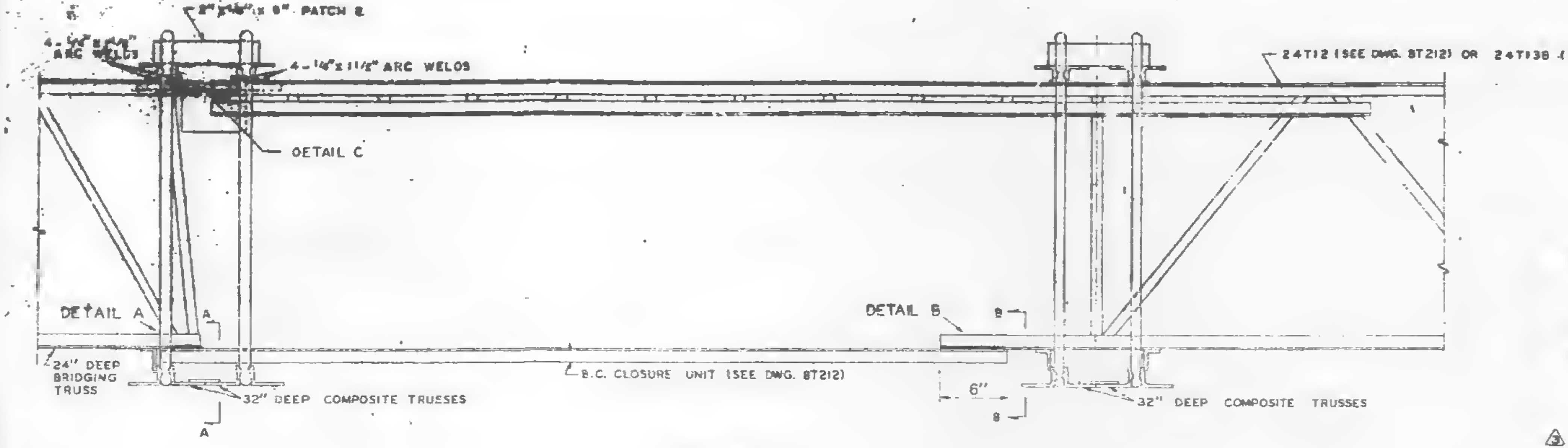
NO.	DATE	REVISION	BY
3	9-3-68	AS NOTED	G.D.C.
2	8-14-68	GENERAL	T.M.C.
1	7-9-68	GENERAL	T.M.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

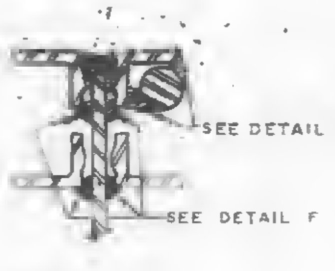
CONNECTION DETAILS (3C) (1C) (18C) & (19C)

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT. MADISON, ILLINOIS
DESIGN DRAWING - NO. 7-AB4-19
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE 12/2/68
DRAWN BY: T.M. CHURA DATE 2-24-68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: J.R. PAUL DATE 2-24-68
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY: A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD204

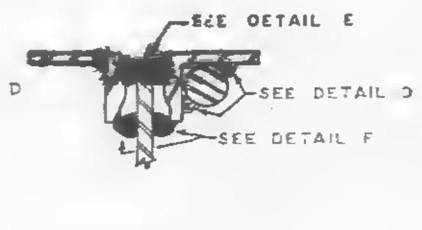
A	11-13-68	CLOSURE UNIT AS NOTED	L.W.H.


2" x 1/4" x 6" PATCH R
4 - 1/4" x 1 1/2" ARC WELDS
4 - 1/4" x 1 1/2" ARC WELDS
DETAIL C
24T12 (SEE DWG. BT212) OR 24T13B (SEE DWG BT213B)
DETAIL A
A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG. BT212)
DETAIL B
B
6"
32" DEEP COMPOSITE TRUSSES

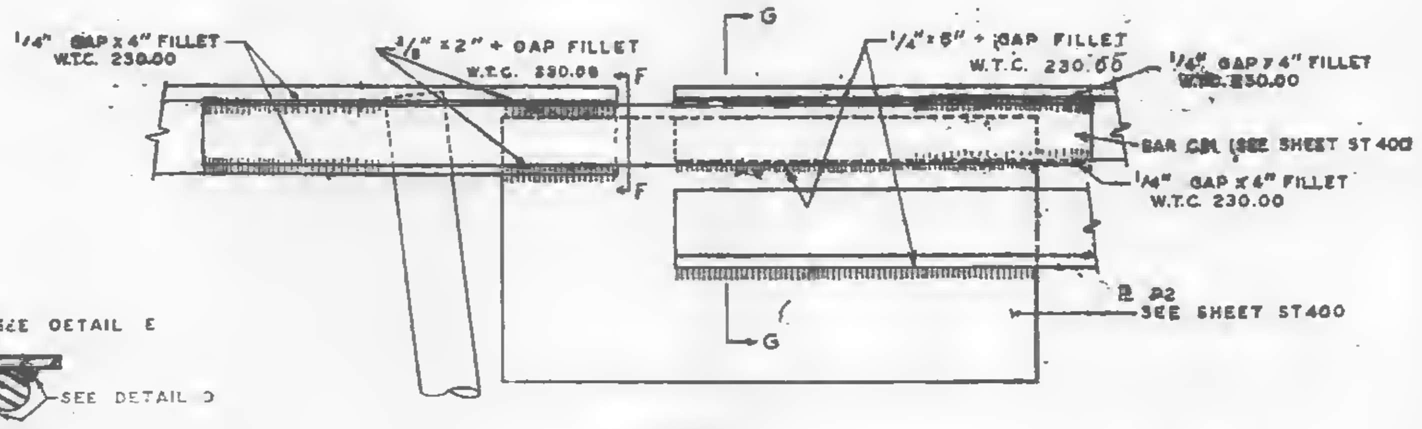
BRIDGING



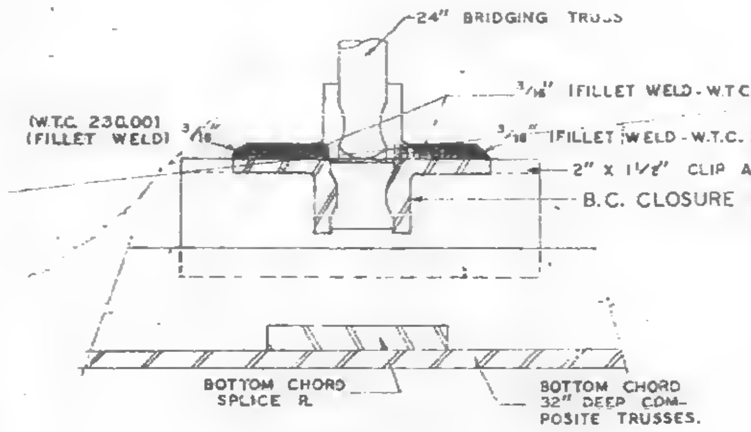
③ SECTION G-G



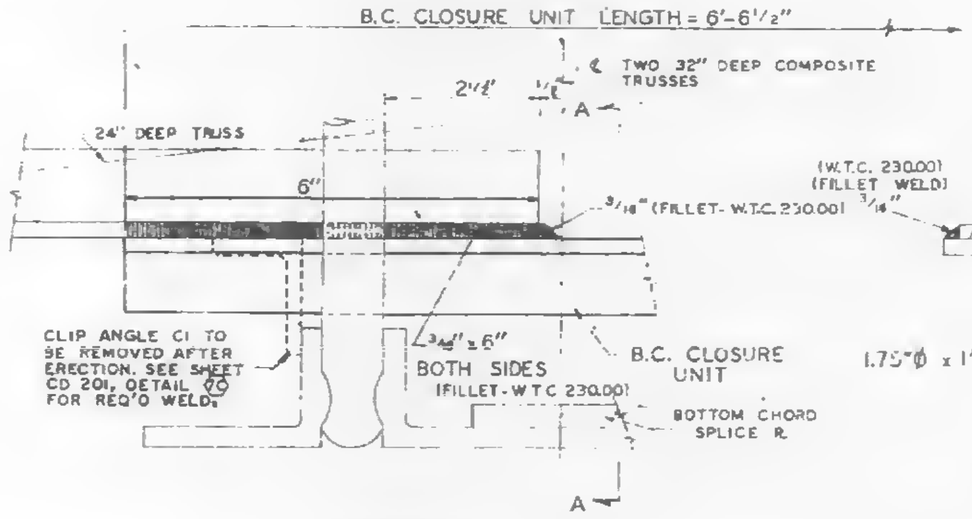
SECTION F-F


1/4" GAP x 4" FILLET W.T.C. 230.00
3/16" x 2" + GAP FILLET W.T.C. 230.00
F
G
1/4" x 6" + GAP FILLET W.T.C. 230.00
1/4" GAP x 4" FILLET W.T.C. 230.00
BAR CD1 (SEE SHEET ST 400)
1/4" GAP x 6" FILLET W.T.C. 230.00
R P2 SEE SHEET ST400
G

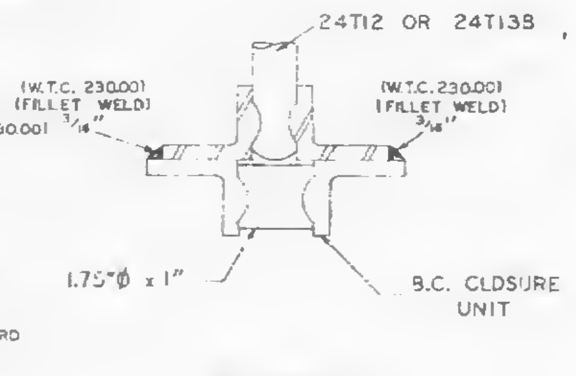
③ DETAIL C


24" BRIDGING TRUSS
(W.T.C. 230.00) (FILLET WELD) 3/16
3/16" (FILLET WELD - W.T.C. 230.00)
3/16" (FILLET WELD - W.T.C. 230.00)
2" x 1 1/2" CLIP ANGLE (C1)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE R
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES.

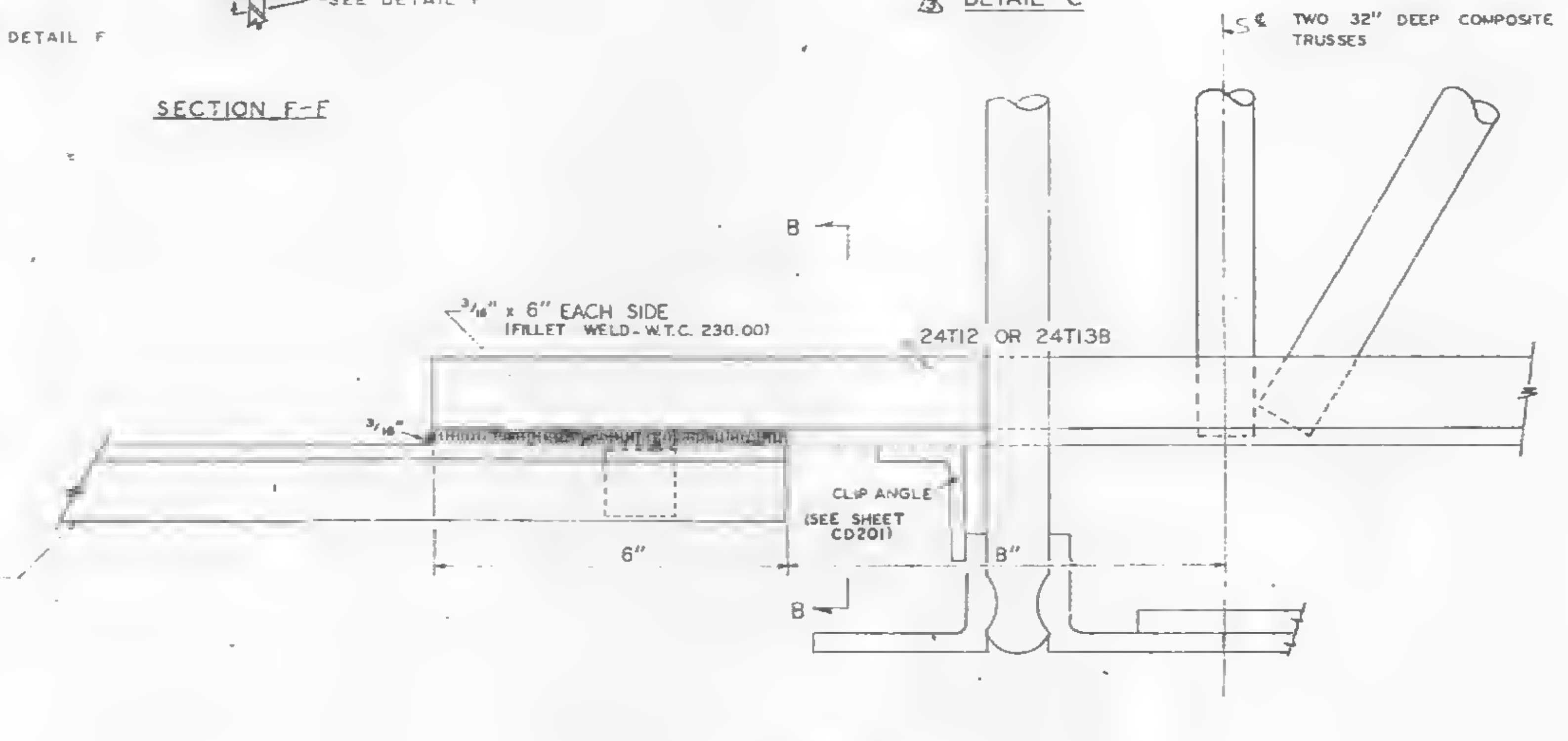
SECTION A-A


B.C. CLOSURE UNIT LENGTH = 6'-6 1/2"
2 1/2"
1/2"
℄ TWO 32" DEEP COMPOSITE TRUSSES
A
24" DEEP TRUSS
6"
3/16" (FILLET - W.T.C. 230.00)
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CD 201, DETAIL 6C FOR REQ'D WELDS.
3/16" x 6" BOTH SIDES (FILLET - W.T.C. 230.00)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE R
A

DETAIL A

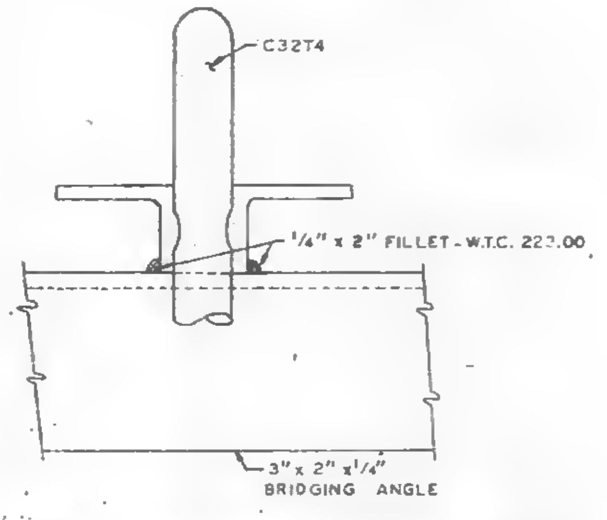

24T12 OR 24T13B
(W.T.C. 230.00) (FILLET WELD) 3/16
(W.T.C. 230.00) (FILLET WELD) 3/16
1.75"Ø x 1"
B.C. CLOSURE UNIT

SECTION B-B

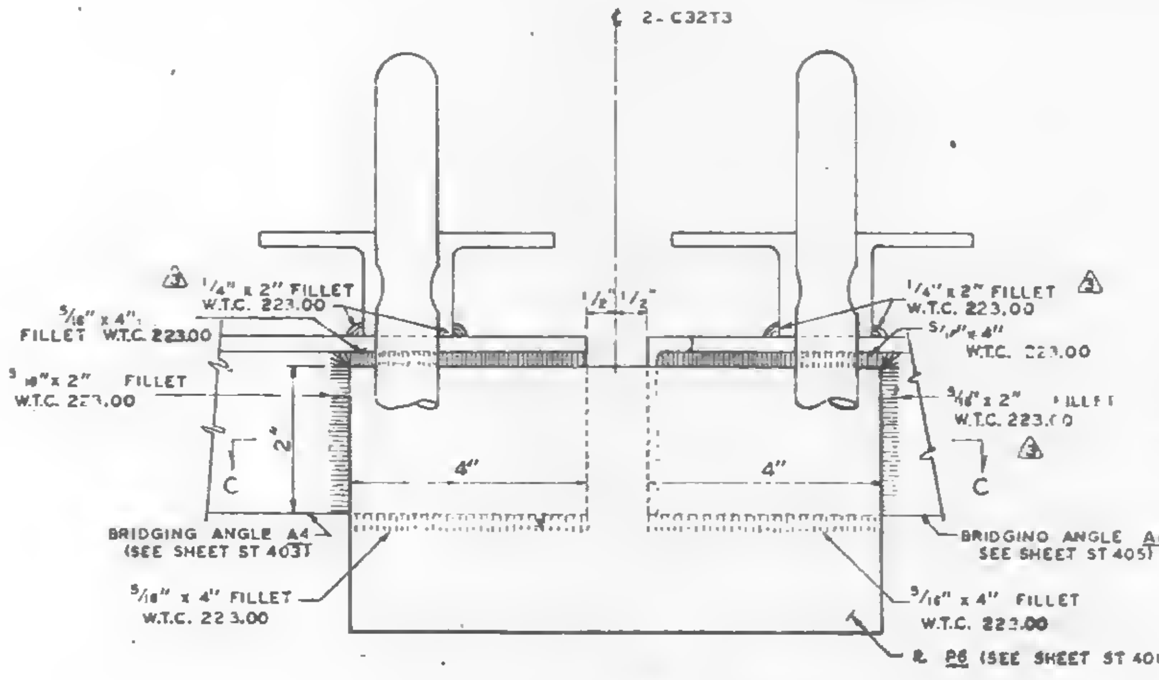

℄ TWO 32" DEEP COMPOSITE TRUSSES
B
3/16" x 6" EACH SIDE (FILLET WELD - W.T.C. 230.00)
24T12 OR 24T13B
3/16
CLIP ANGLE (SEE SHEET CD201)
6"
8"
B

DETAIL B

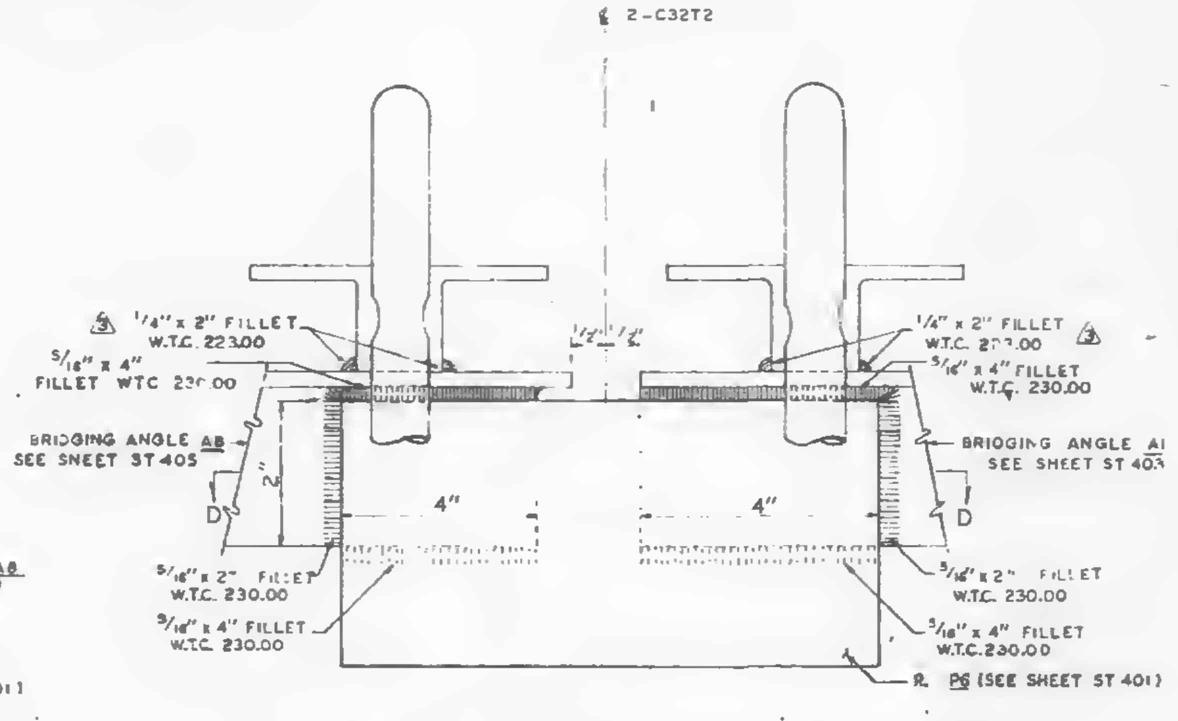
BRIDGING TRUSS CONNECTION (1C)


C32T4
1/4" x 2" FILLET - W.T.C. 223.00
3" x 2" x 1/4" BRIDGING ANGLE

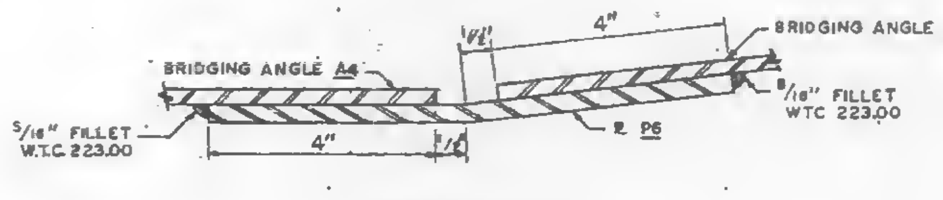
INTERIOR BRIDGING ANGLE CONNECTION (3-C)


℄ 2-C32T3
③ 1/4" x 2" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 223.00
5/16" x 2" FILLET W.T.C. 223.00
1/4" x 2" FILLET W.T.C. 223.00 ③
5/16" x 4" W.T.C. 223.00
5/16" x 2" FILLET W.T.C. 223.00 ③
1/2"
1/2"
2"
C
4"
4"
C
BRIDGING ANGLE A4 (SEE SHEET ST 403)
BRIDGING ANGLE A8 SEE SHEET ST 405
5/16" x 4" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 223.00
R P6 (SEE SHEET ST 401)

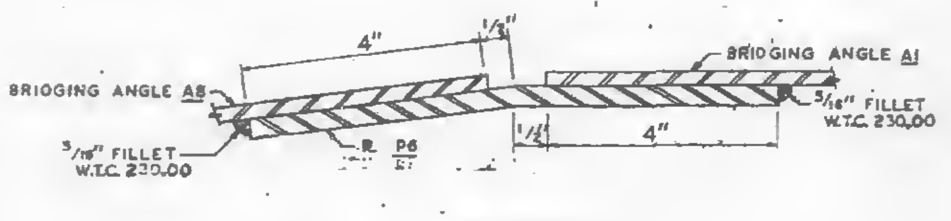
INTERIOR BRIDGING ANGLE CONNECTION (18C)


℄ 2-C32T2
③ 1/4" x 2" FILLET W.T.C. 223.00
5/16" x 4" FILLET WTC 230.00
BRIDGING ANGLE A8 SEE SHEET ST 405
1/4" x 2" FILLET W.T.C. 223.00 ③
5/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A1 SEE SHEET ST 403
1/2"
1/2"
D
4"
4"
D
5/16" x 2" FILLET W.T.C. 230.00
5/16" x 4" FILLET W.T.C. 230.00
5/16" x 2" FILLET W.T.C. 230.00
5/16" x 4" FILLET W.T.C. 230.00
R P6 (SEE SHEET ST 401)

PANEL JOINT BRIDGING ANGLE CONNECTION (19C)

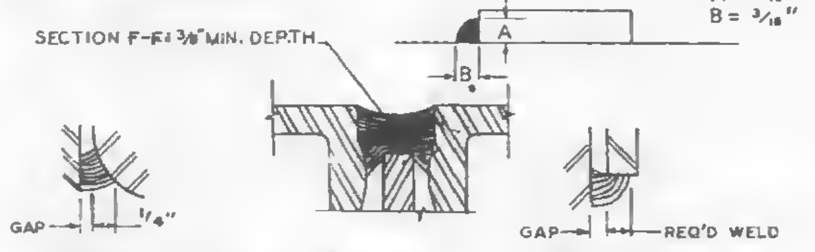


SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



DETAIL D

③ DETAIL E

DETAIL F

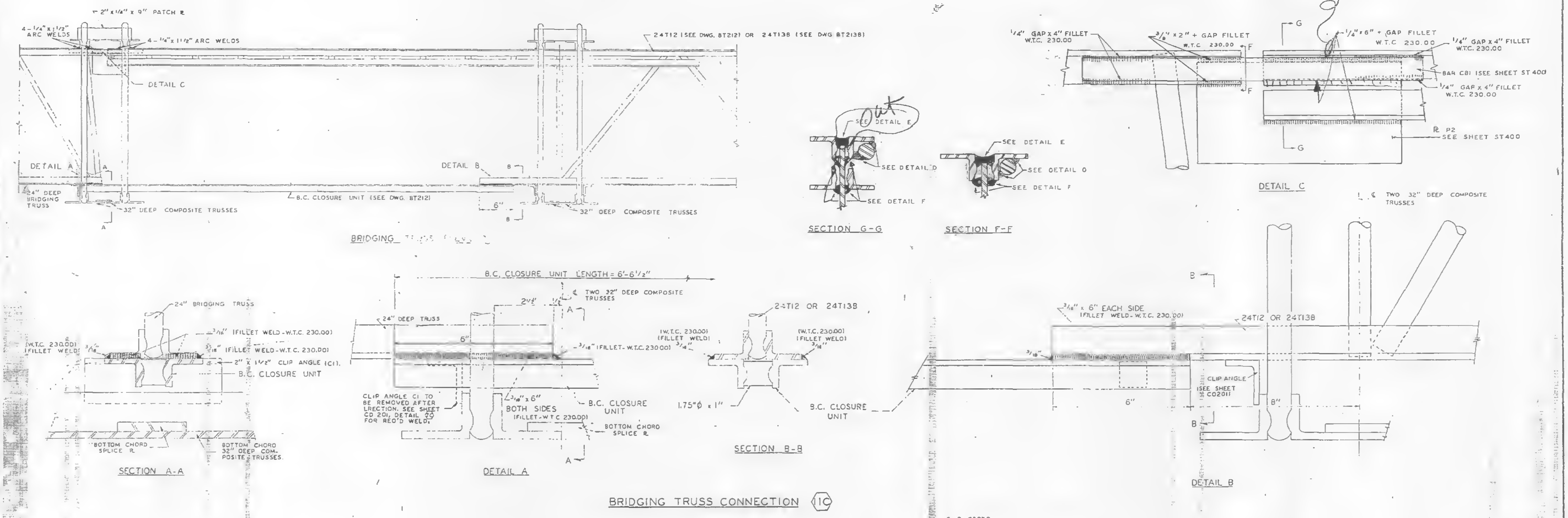
NO.	DATE	REVISION	BY
③	9-3-68	AS NOTED	G.D.C.
②	8-14-68	GENERAL	T.M.C.
①	7-9-68	GENERAL	T.M.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

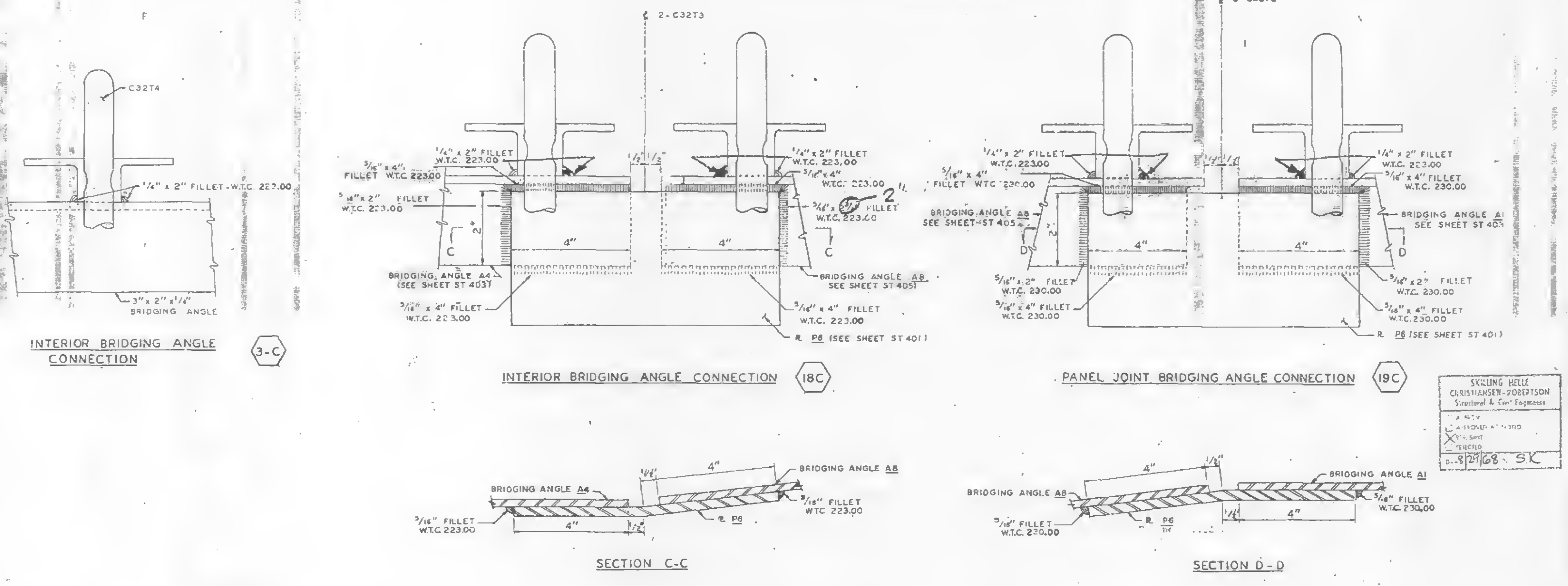
CONNECTION DETAILS (3C) (1C) (18C) & (19C)

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-19	PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A.	DATE 9/19/68	DRAWN BY: T.M. CHURA DATE: 2-24-68	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: 2-24-68	IN CHARGE OF: PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD204


2" x 1/4" x 9" PATCH ℞
4 - 1/4" x 1 1/2" ARC WELDS
4 - 1/4" x 1 1/2" ARC WELDS
24T12 (SEE DWG. BT2121 OR 24T138 (SEE DWG BT2138)
DETAIL C
DETAIL A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG. BT2121
DETAIL B
32" DEEP COMPOSITE TRUSSES
BRIDGING TRUSS
Out
SEE DETAIL E
SEE DETAIL D
SEE DETAIL F
SECTION G-G
SEE DETAIL E
SEE DETAIL D
SEE DETAIL F
SECTION F-F
1/4" GAP x 4" FILLET W.T.C. 230.00
3/16" x 2" + GAP FILLET W.T.C. 230.00
1/4" x 6" + GAP FILLET W.T.C. 230.00
1/4" GAP x 4" FILLET W.T.C. 230.00
8A4 C81 (SEE SHEET ST400
1/4" GAP x 4" FILLET W.T.C. 230.00
℞ P2 SEE SHEET ST400
DETAIL C
℄ TWO 32" DEEP COMPOSITE TRUSSES
24" BRIDGING TRUSS
3/16" (FILLET WELD - W.T.C. 230.00)
3/16" (FILLET WELD - W.T.C. 230.00)
(W.T.C. 230.00) (FILLET WELD)
2" x 1 1/2" CLIP ANGLE (C1)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES
SECTION A-A
B.C. CLOSURE UNIT LENGTH = 6'-6 1/2"
℄ TWO 32" DEEP COMPOSITE TRUSSES
24" DEEP TRUSS
3/16" (FILLET - W.T.C. 230.00)
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CD 201, DETAIL 20 FOR REQ'D WELD.
3/16" x 6" BOTH SIDES (FILLET - W.T.C. 230.00)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
DETAIL A
24T12 OR 24T138
(W.T.C. 230.00) (FILLET WELD)
1.75"⌀ x 1"
B.C. CLOSURE UNIT
SECTION B-B
3/16" x 6" EACH SIDE (FILLET WELD - W.T.C. 230.00)
24T12 OR 24T138
CLIP ANGLE (SEE SHEET CD201)
DETAIL B

BRIDGING TRUSS CONNECTION (1C)


C32T4
1/4" x 2" FILLET - W.T.C. 223.00
3" x 2" x 1/4" BRIDGING ANGLE
℄ 2-C32T3
1/4" x 2" FILLET W.T.C. 223.00
5/16" x 4" FILLET W.T.C. 223.00
5/16" x 2" FILLET W.T.C. 223.00
BRIDGING ANGLE A4 (SEE SHEET ST403)
5/16" x 4" FILLET W.T.C. 223.00
BRIDGING ANGLE A8 SEE SHEET ST405
5/16" x 4" FILLET W.T.C. 223.00
℞ P6 (SEE SHEET ST401)
℄ 2-C32T2
BRIDGING ANGLE A8 SEE SHEET ST405
BRIDGING ANGLE A1 SEE SHEET ST403
5/16" x 2" FILLET W.T.C. 230.00
5/16" x 4" FILLET W.T.C. 230.00
℞ P6 (SEE SHEET ST401)
BRIDGING ANGLE A4
BRIDGING ANGLE A8
5/16" FILLET W.T.C. 223.00
℞ P6
BRIDGING ANGLE A8
BRIDGING ANGLE A1
5/16" FILLET W.T.C. 230.00

INTERIOR BRIDGING ANGLE CONNECTION (3-C)

INTERIOR BRIDGING ANGLE CONNECTION (18C)

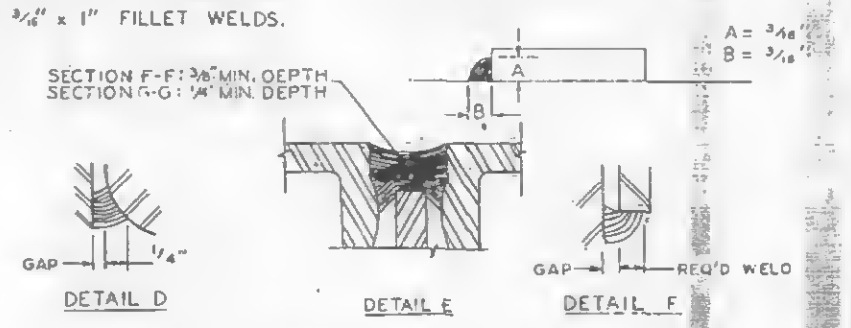
PANEL JOINT BRIDGING ANGLE CONNECTION (19C)

SECTION C-C

SECTION D-D

SKILLING HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☒ REVISE
REJECTED
8/29/68 SK

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



DETAIL D

DETAIL E

DETAIL F

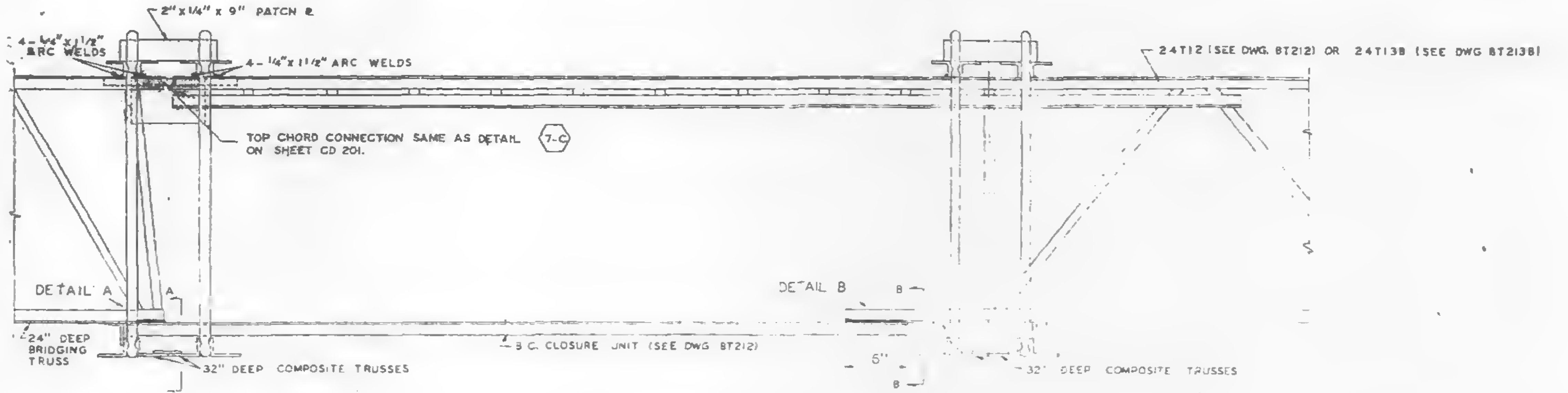
NO.	DATE	REVISION	BY
2	8-14-68	GENERAL	T.M.C.
1	7-9-68	GENERAL	T.M.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

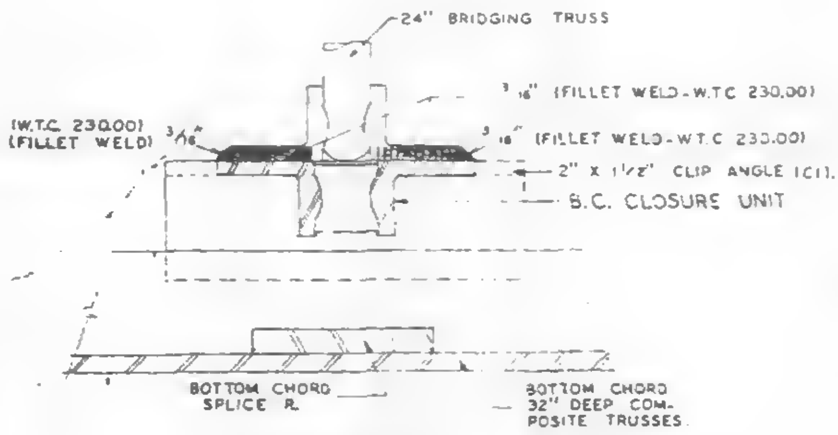
CONNECTION DETAILS (3C) (1C) (18C) & (19C)

FABRICATION BY: LACLEDE STEEL COMPANY

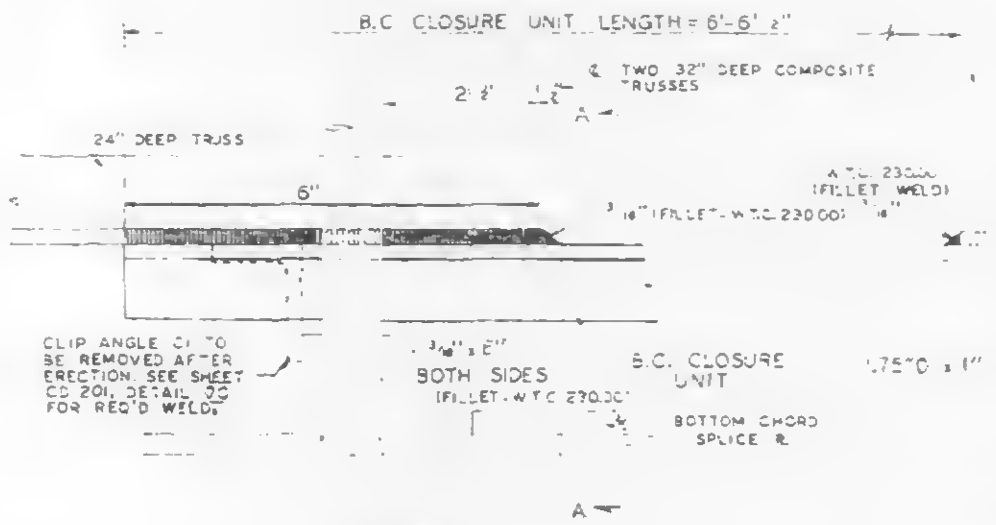
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-19	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A	DATE	DRAWN BY T.M. CHUBA DATE 2-24-68	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO WTC 221	SHEET NO CD204


2" x 1/4" x 9" PATCH ℞
4 - 1/4" x 1 1/2" ARC WELDS
4 - 1/4" x 1 1/2" ARC WELDS
TOP CHORD CONNECTION SAME AS DETAIL 7-C ON SHEET CD 201.
24T12 (SEE DWG. BT212) OR 24T13B (SEE DWG BT213B)
DETAIL A
A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG BT212)
DETAIL B
B
6"
B
32" DEEP COMPOSITE TRUSSES

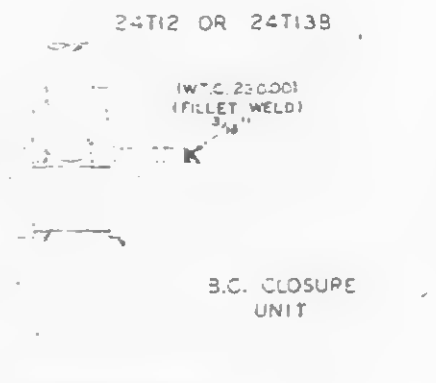
BRIDGING ELEVATION


24" BRIDGING TRUSS
(W.T.C. 230.00) (FILLET WELD) 3/16"
3/16" (FILLET WELD - W.T.C 230.00)
3/16" (FILLET WELD - W.T.C 230.00)
2" x 1 1/2" CLIP ANGLE (C1).
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES

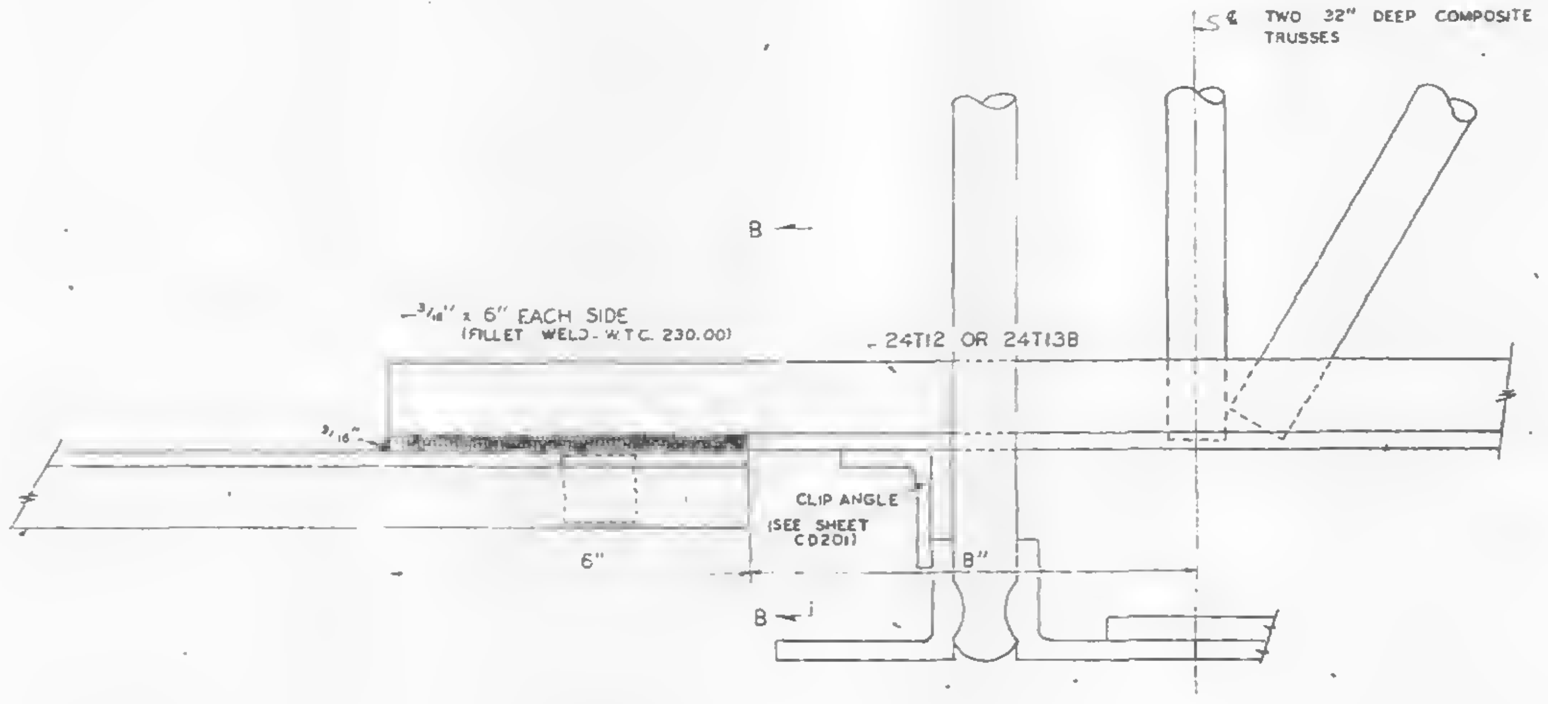
SECTION A-A


B.C CLOSURE UNIT LENGTH = 6'-6 1/2"
℄ TWO 32" DEEP COMPOSITE TRUSSES
2' 2"
A
24" DEEP TRUSS
6"
3/16" (FILLET - W.T.C 230.00)
A.T.C. 230.00 (FILLET WELD)
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CD 201, DETAIL 3C FOR REQ'D WELD.
3/16" x 6" BOTH SIDES (FILLET - W.T.C 230.00)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE ℞
1.75"O x 1"
A

DETAIL A

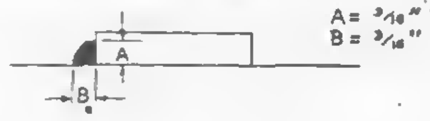


SECTION B-B


℄ TWO 32" DEEP COMPOSITE TRUSSES
B
3/16" x 6" EACH SIDE (FILLET WELD - W.T.C. 230.00)
24T12 OR 24T13B
3/16"
CLIP ANGLE (SEE SHEET CD201)
6"
8"
B

DETAIL B

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



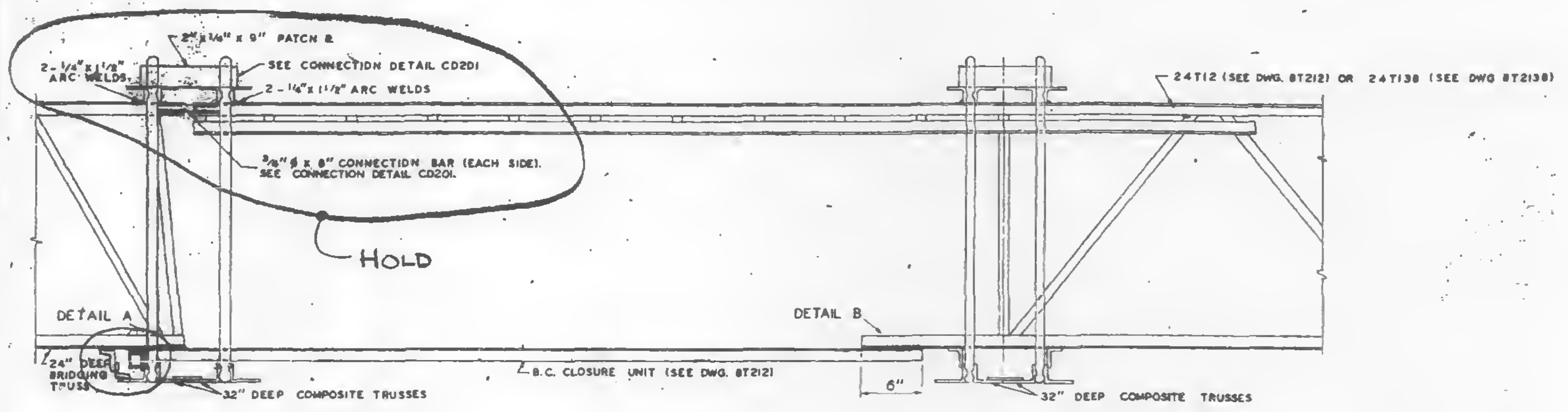
NO.	DATE	REVISION	BY
⚠1	7-9-68	GENERAL	T.M.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

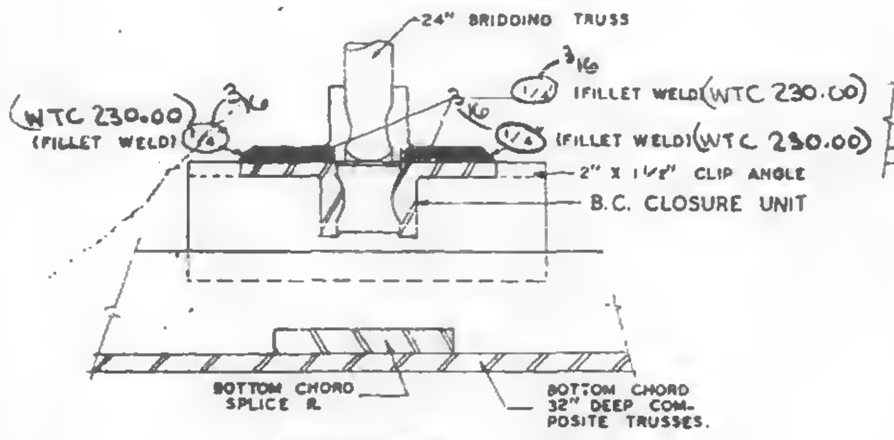
CONNECTION DETAILS FOR 24T12 & 24T13B BRIDGING TRUSSES (1 of 2)

FABRICATION BY: LACLEDE STEEL COMPANY

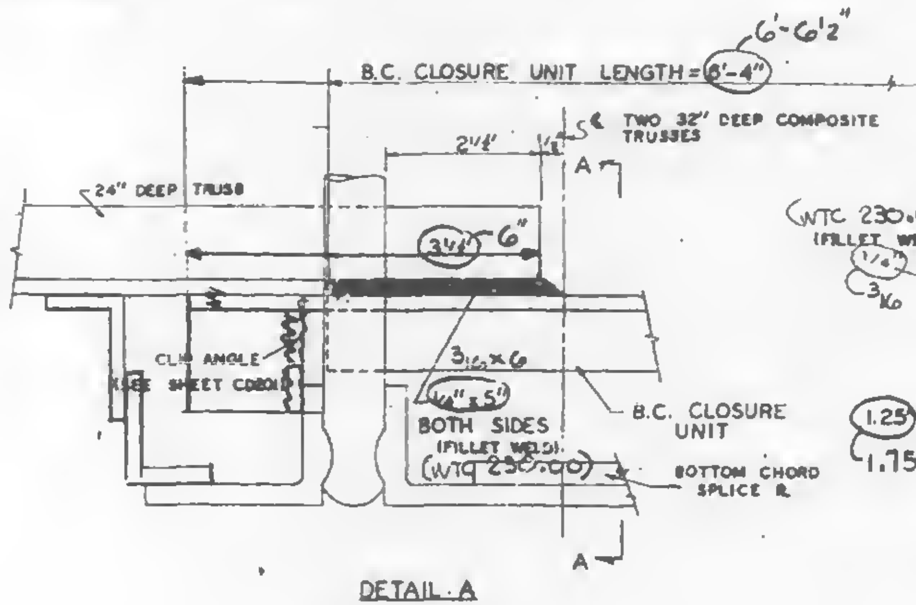
FABRICATED AT MADISON ILLINOIS		DESIGN DRAWING NO. 7-AB4-19	PLATE
APPROVED FOR FABRICATION BY Gjw FOR P.O.N.Y.A	DATE 7/12/68	DRAWN BY: T.M. CHURA DATE 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD204


2"x1/4" x 9" PATCH ℞
2-1/2"x1 1/2" ARC WELDS
SEE CONNECTION DETAIL CD201
2-1/4"x1 1/2" ARC WELDS
3/8" ϕ x 8" CONNECTION BAR (EACH SIDE).
SEE CONNECTION DETAIL CD201.
HOLD
24T12 (SEE DWG. 8T212) OR 24T138 (SEE DWG 8T2138)
DETAIL A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG. 8T212)
DETAIL B
6"
32" DEEP COMPOSITE TRUSSES

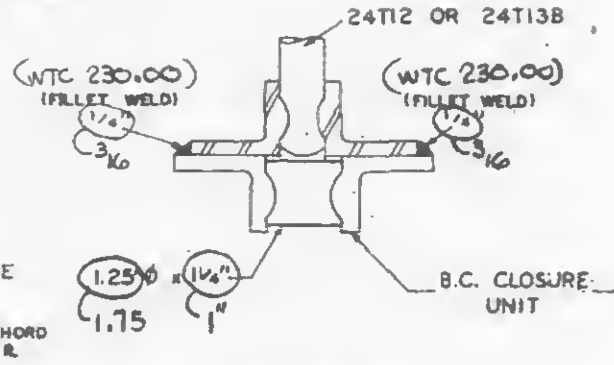
BRIDGING TRUSS ELEVATION



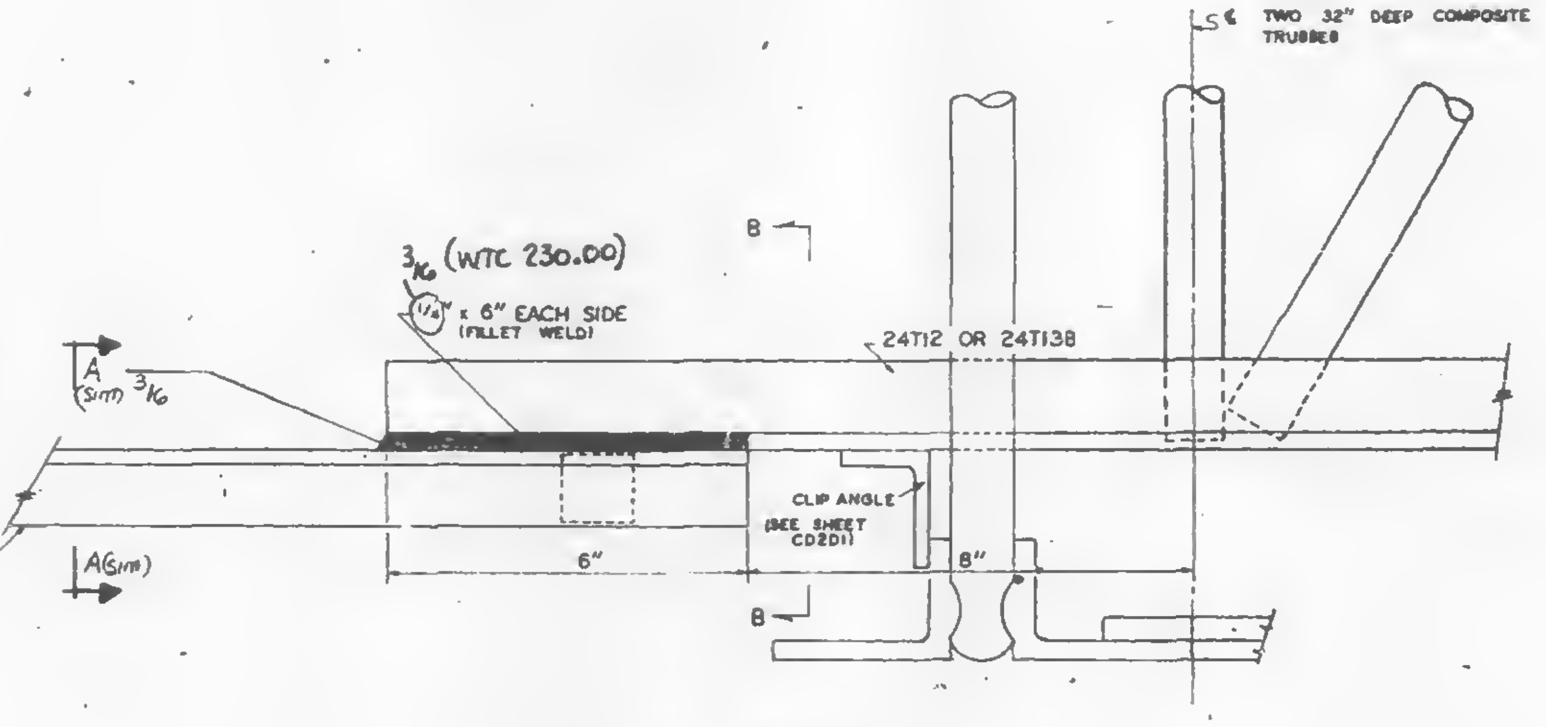
SECTION A-A



DETAIL A



SECTION B-B

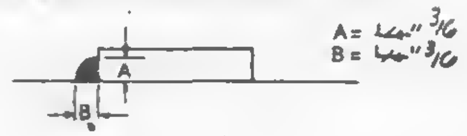


DETAIL B

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS.

3/16



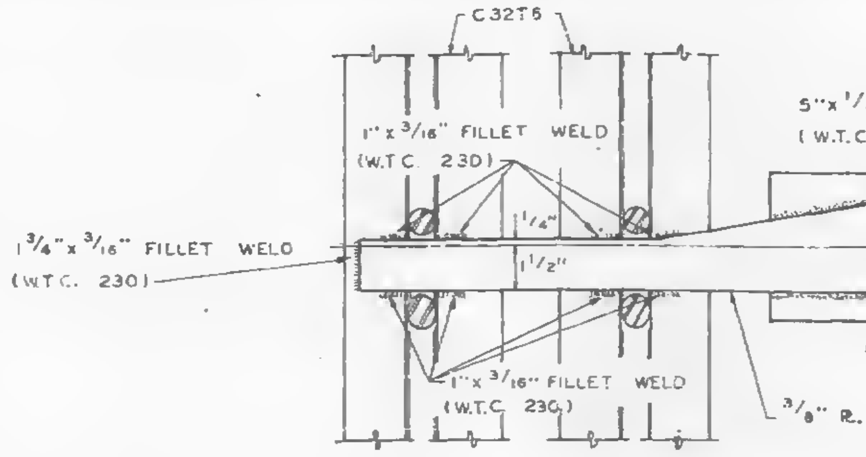
SKILLING · HELLE
CHRISTIANSEN · ROBERTSON
Structural & Civil Engineers
4/24/68 SK

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

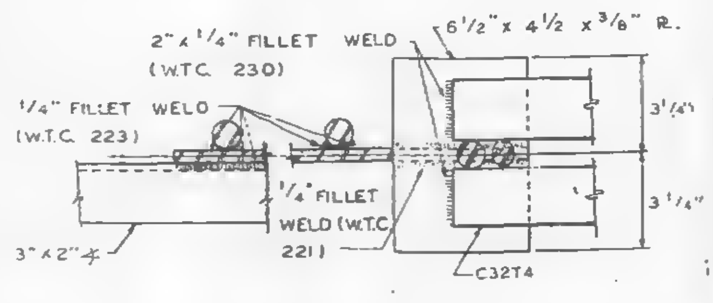
CONNECTION DETAILS FOR 24T12 & 24T138 BRIDGING TRUSSES

FABRICATION BY: LACLEDE STEEL COMPANY

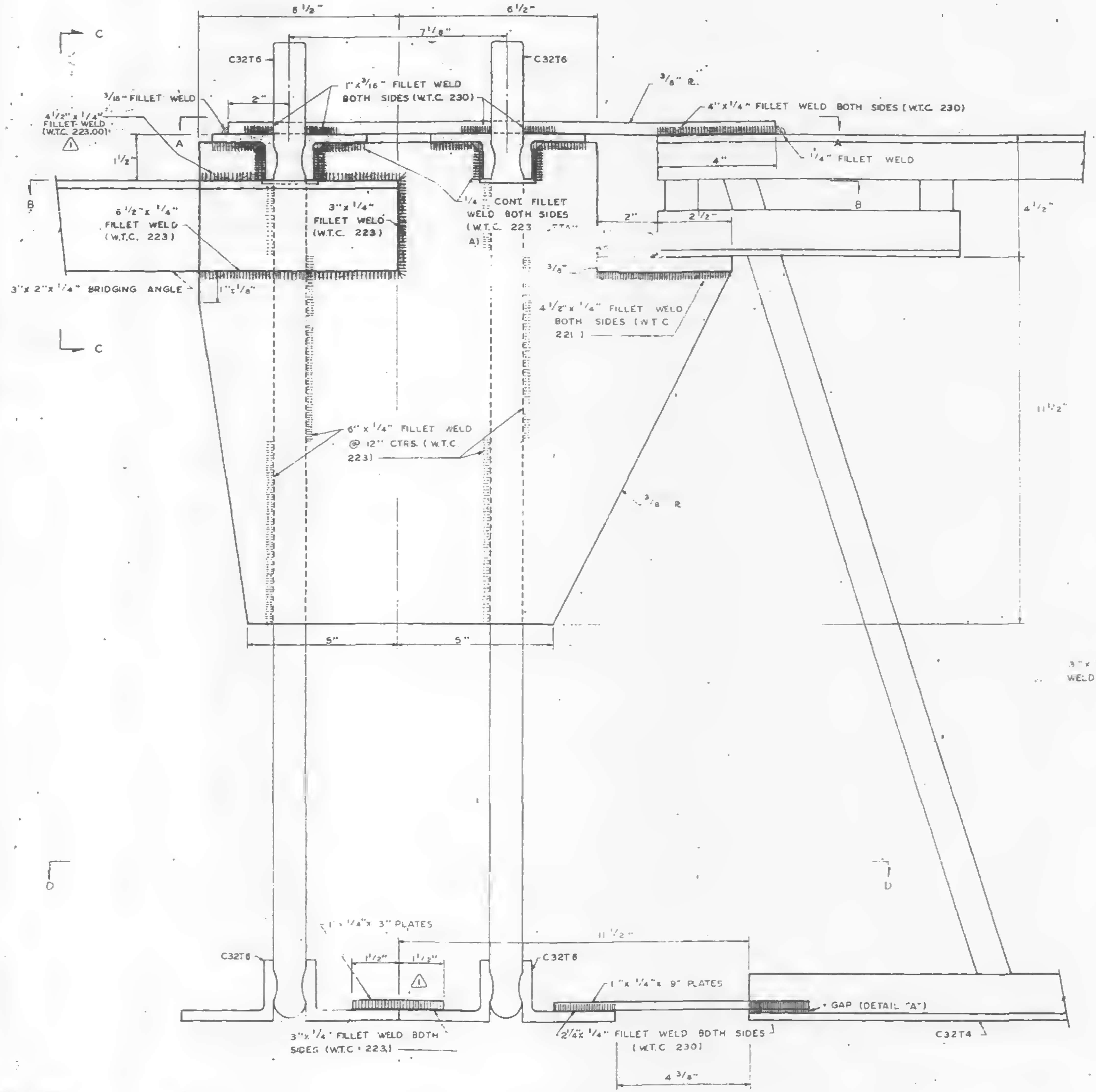
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-10	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A	DATE	DRAWN BY: T.M. CHURA DATE. 2-24-68	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD204


C32T6
1" x 3/16" FILLET WELD (W.T.C. 230)
5" x 1/4" FILLET WELD (W.T.C. 230)
1 3/4" x 3/16" FILLET WELD (W.T.C. 230)
1/4"
1 1/2"
1/2"
1/2"
1" x 3/16" FILLET WELD (W.T.C. 230)
3/8" R.
C32T4

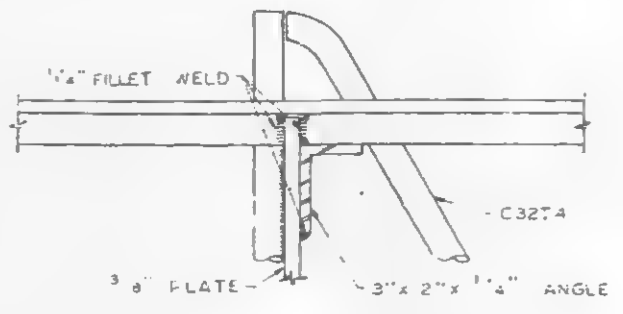
△1 SECTION A-A


2" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2" x 4 1/2 x 3/8" R.
1/4" FILLET WELD (W.T.C. 223)
1/4" FILLET WELD (W.T.C. 221)
3" x 2" ∠
C32T4
3 1/4"
3 1/4"

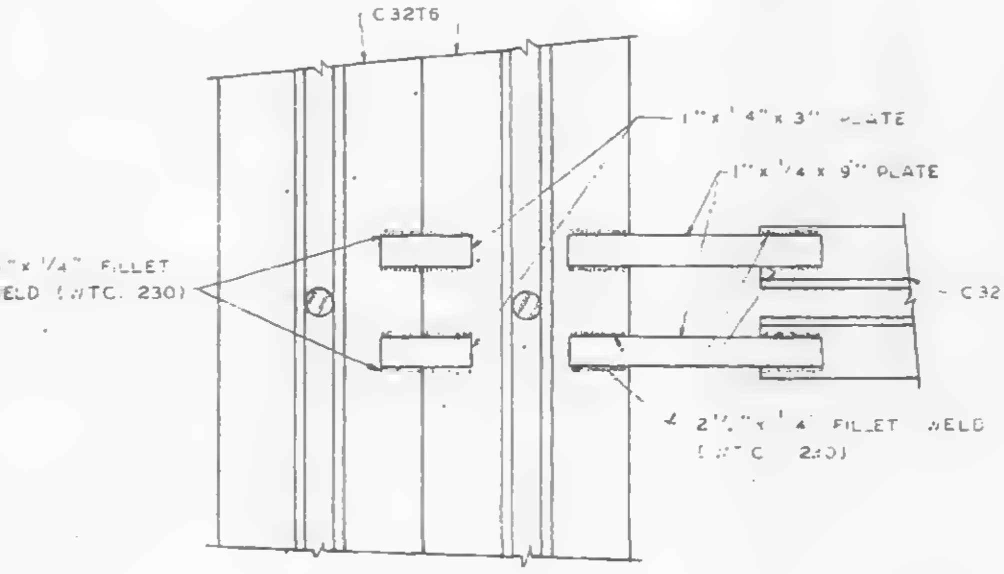
△1 SECTION B-B


C
C
6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
3/16" FILLET WELD
1" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" R.
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223.00)
△1
2"
A
A
1 1/2"
1/4" FILLET WELD
4"
B
B
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
3" x 1/4" FILLET WELD (W.T.C. 223)
1/4" CONT. FILLET WELD BOTH SIDES (W.T.C. 223 DETAIL A)
2"
2 1/2"
4 1/2"
3/8"
3" x 2" x 1/4" BRIDGING ANGLE
1" ± 1/8"
4 1/2" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 221)
6" x 1/4" FILLET WELD @ 12" CTRS. (W.T.C. 223)
3/8 R
11 1/2"
5"
5"
D
D
1" x 1/4" x 3" PLATES
11 1/2"
1 1/2"
1 1/2"
△1
C32T6
C32T6
1" x 1/4" x 9" PLATES
GAP (DETAIL "A")
3" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
C32T4
4 3/8"

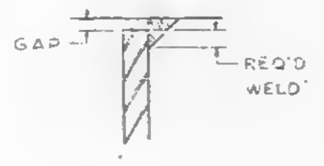
C32T4 TO 3" x 2" CONNECTION DETAIL (15-C)



SECTION C-C


C32T6
1" x 1/4" x 3" PLATE
1" x 1/4 x 9" PLATE
3" x 1/4" FILLET WELD (W.T.C. 230)
C32T4
2 1/4" x 1/4" FILLET WELD (W.T.C. 230)

SECTION D-D



DETAIL "A"

REF. DR.

7-A84-12	5-8-68
7-A84-13.2	5-4-68
7-A81-8	5-10-68
7-A81-12	5-10-68

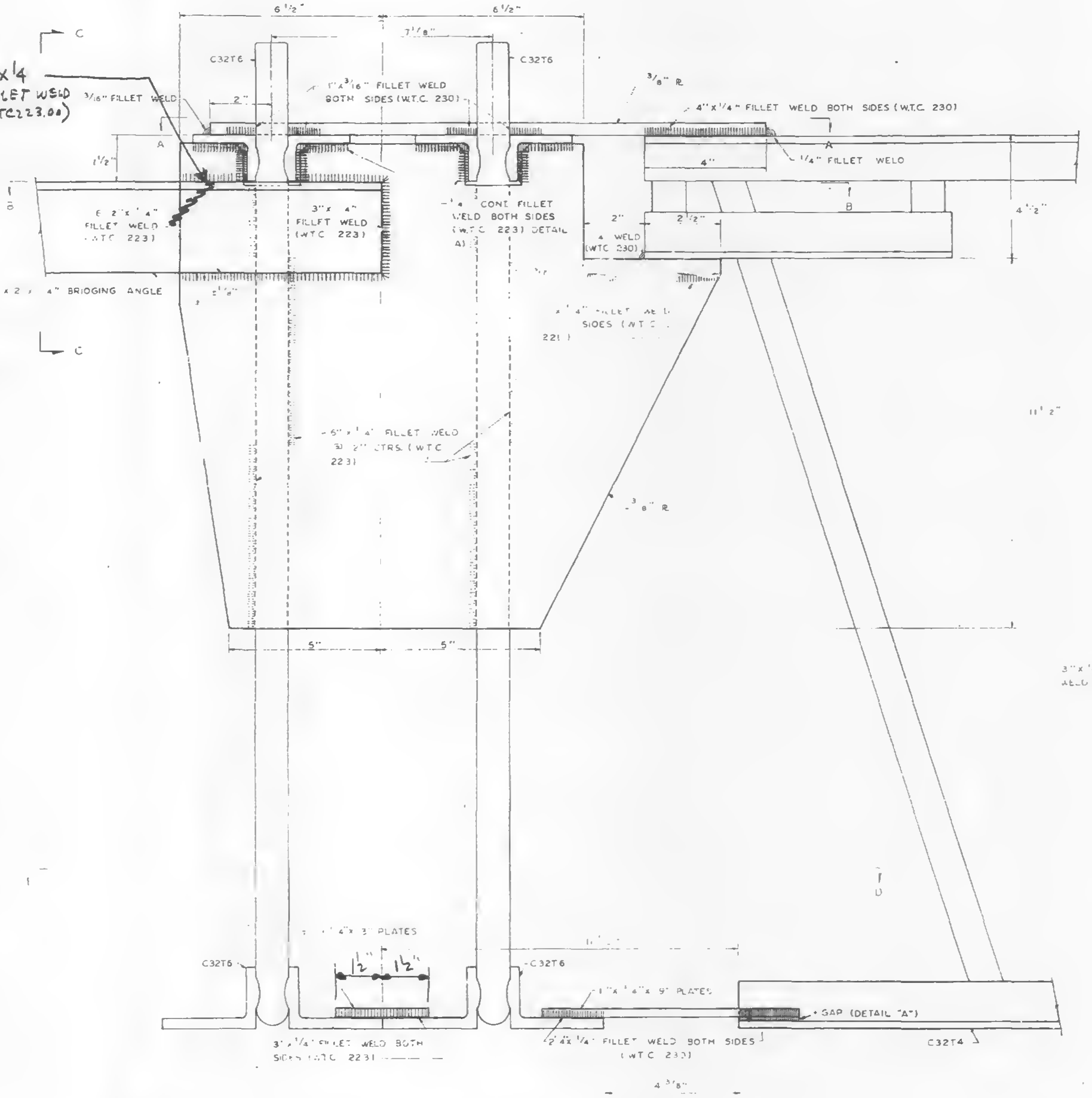
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATES TO BE ASTM A36 △1

NO.	DATE	REVISION	BY
△1	6-20-68	WELD, NOTE, DIMENSIONS ADDED	G.D.C.

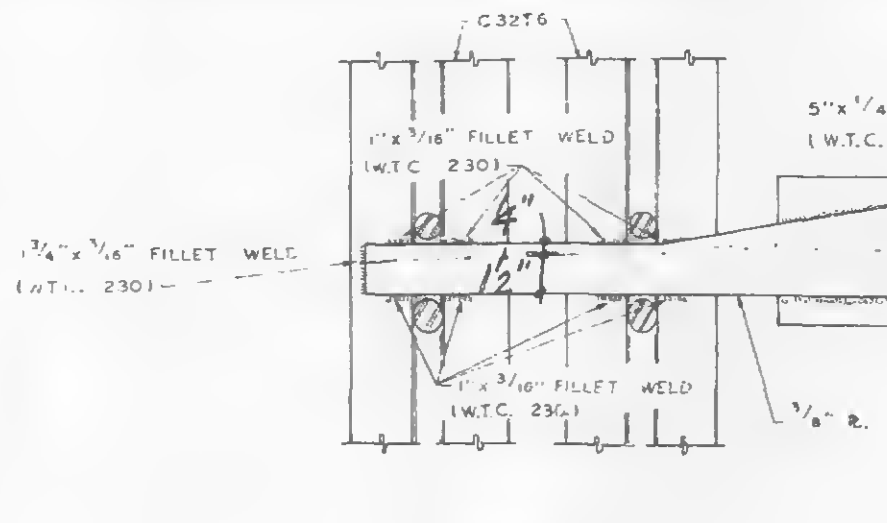
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T4 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 15-C

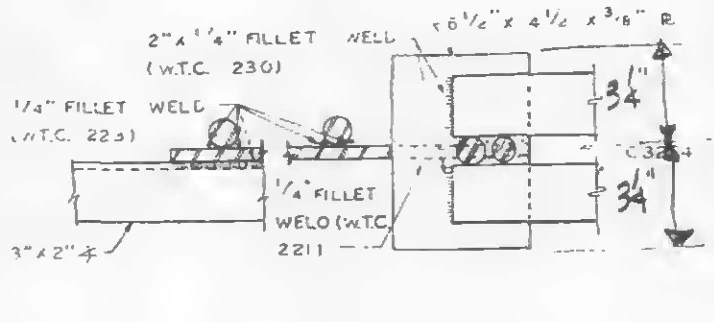
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A. DATE 6/25/68
APPROVED FOR FABRICATION BY LACLEDE STEEL CO FOR FABRICATOR DATE
DETAILED BY: A.C. WEBER
DESIGN DRAWING NO. 7-A84-121 5-17-68 PLATE
DRAWN BY: R.R.
DATE MAY 14, 1968
CHECKED BY: T.M. CHURA
DATE MAY 15, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 205


C
C
4¾ x ¼ FILLET WELD (WTC223.00)
3/16" FILLET WELD
6 ½"
6 ½"
7⅛"
C32T6
C32T6
1" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
2"
1½"
A
3" x 4" FILLET WELD (W.T.C. 223)
2" x ¼" FILLET WELD (W.T.C. 223)
¼" CONT FILLET WELD BOTH SIDES (W.T.C. 223) DETAIL A)
3" x 2" x ¼" BRIDGING ANGLE
3/8" R
4" x ¼" FILLET WELD BOTH SIDES (W.T.C. 230)
A
¼" FILLET WELD
4"
B
2"
2½"
¼" WELD (WTC 230)
4½"
¼" FILLET WELD BOTH SIDES (W.T.C. 221)
11¼"
5" x ¼" FILLET WELD @ 2" CTRS. (W.T.C. 223)
3/8" R
5"
5"
D
D
1" x ¼" x 3 PLATES
1½"
1½"
C32T6
C32T6
1" x ¼" x 9" PLATES
GAP (DETAIL "A")
3" x ¼" FILLET WELD BOTH SIDES (W.T.C. 223)
2" x ¼" FILLET WELD BOTH SIDES (W.T.C. 230)
C32T4
4 3/8"

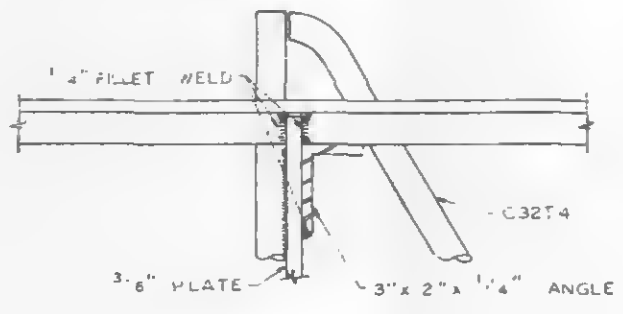
C32T4 TO 3" x 2" CONNECTION DETAIL (15-C)


C32T6
1" x 3/16" FILLET WELD (W.T.C. 230)
5" x ¼" FILLET WELD (W.T.C. 230)
1¾" x 3/16" FILLET WELD (W.T.C. 230)
4"
1½"
1½"
1½"
1" x 3/16" FILLET WELD (W.T.C. 230)
C32T4
3/8" R.

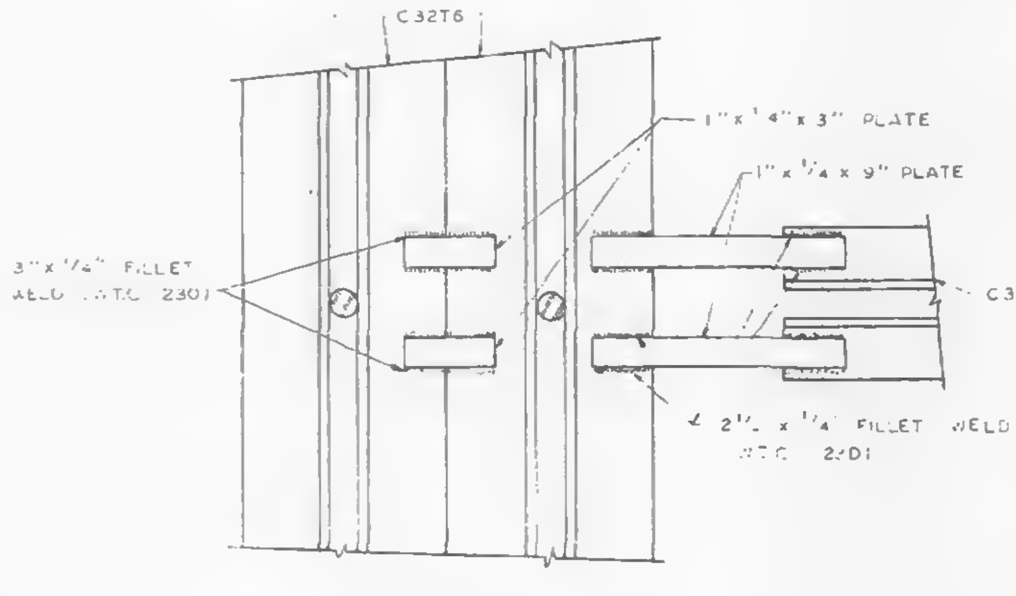
SECTION A-A


2" x ¼" FILLET WELD (W.T.C. 230)
6½" x 4½ x 3/8" R
¼" FILLET WELD (W.T.C. 223)
¼" FILLET WELD (W.T.C. 221)
3" x 2" ∠
3¼"
3¼"
C32T4

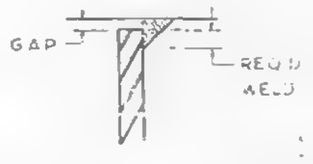
SECTION B-B



SECTION C-C


C32T6
1" x ¼" x 3" PLATE
1" x ¼" x 9" PLATE
3" x ¼" FILLET WELD (W.T.C. 230)
C32T4
2" x ¼" FILLET WELD (W.T.C. 230)

SECTION D-D



DETAIL "A"

6/13/68 WAB

REF. DRWG.

7-AB4-12	5-17-68
[illegible] 22	5-17-68
[illegible] 8	4-1-68
7-AB-12	4-1-68

NOTE

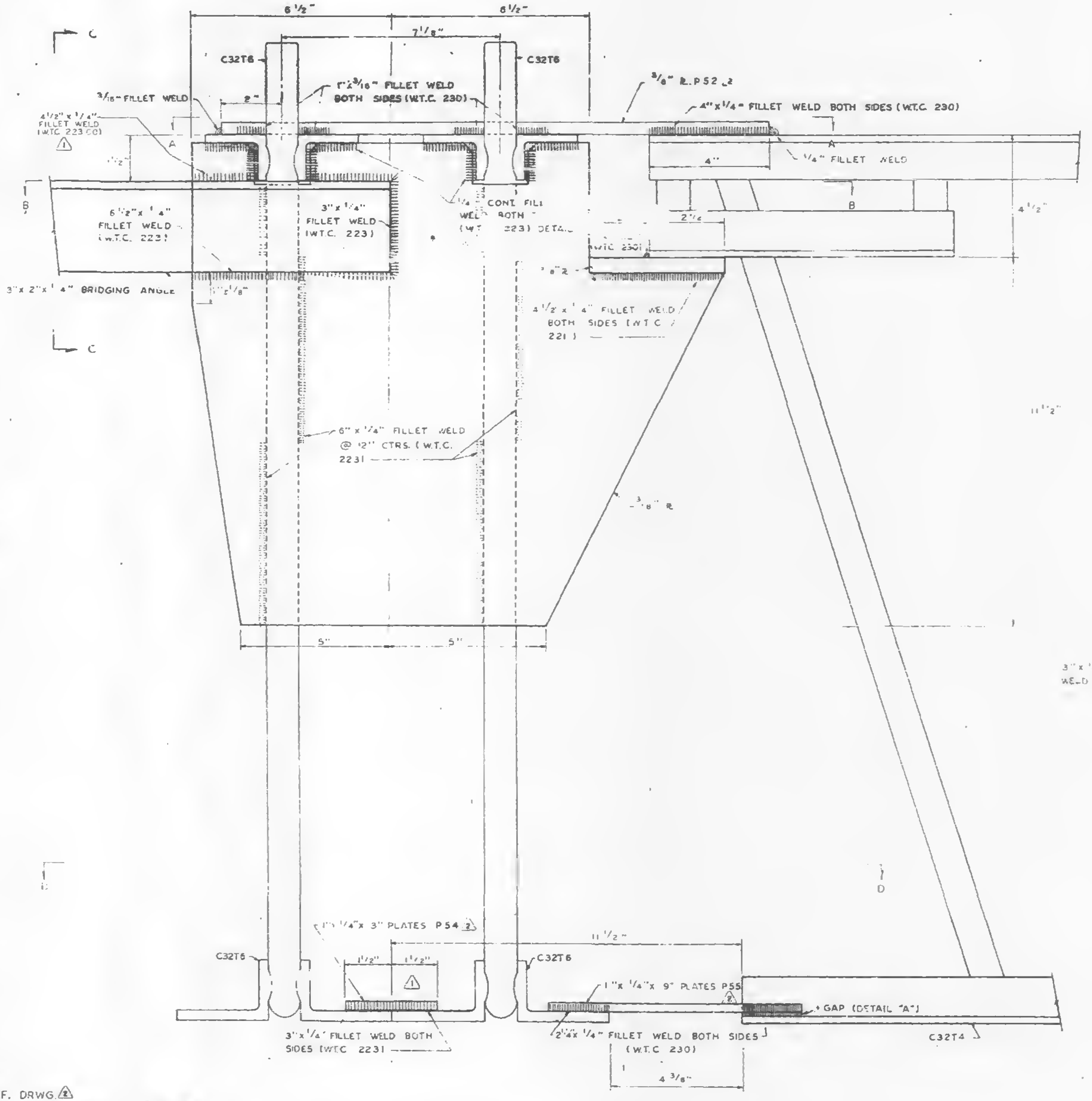
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATE TO BE ASTM A36.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

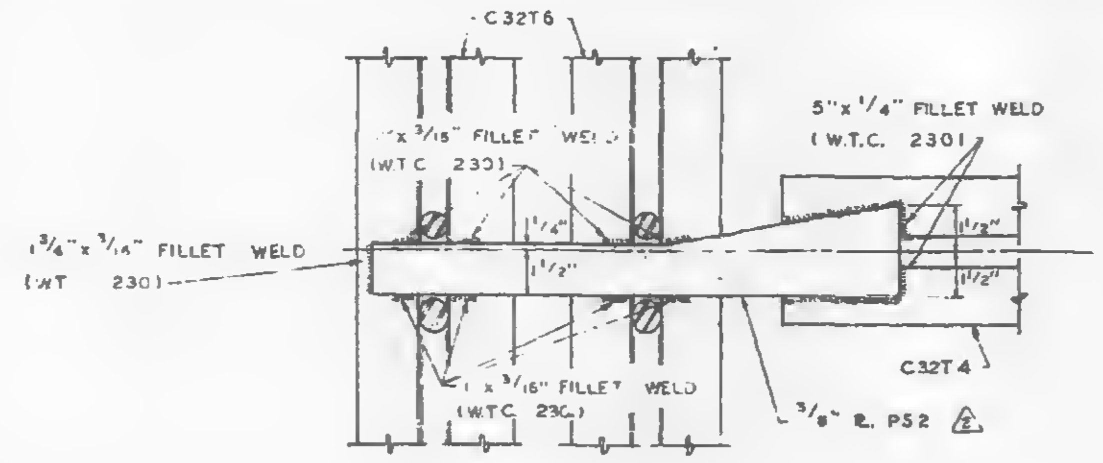
C32T4 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 15-C

FABRICATION BY: LACLEDE STEEL COMPANY

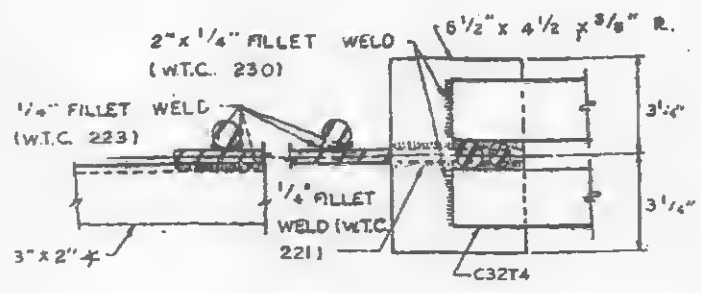
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-121 5-17-68 PLATE	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 205


C
C
B
6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
3/16" FILLET WELD
2"
1" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" PL. P52 2
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223 CO) 1
A
A
1 1/2"
4"
1/4" FILLET WELD
B
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
3" x 1/4" FILLET WELD (W.T.C. 223)
1/4" CONT. FILL WELD BOTH (W.T.C. 223) DETAIL
2 1/4"
4 1/2"
(W.T.C. 230)
3/8" PL.
3" x 2" x 1/4" BRIDGING ANGLE
1 1/8"
4 1/2" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 221)
6" x 1/4" FILLET WELD @ 12" CTRS. (W.T.C. 223)
11 1/2"
3/8" PL.
5"
5"
D
1" x 1/4" x 3" PLATES P54 2
11 1/2"
C32T6
1 1/2"
1 1/2"
1
C32T6
1" x 1/4" x 9" PLATES P55 2
GAP (DETAIL "A")
3" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 3/8"
C32T4

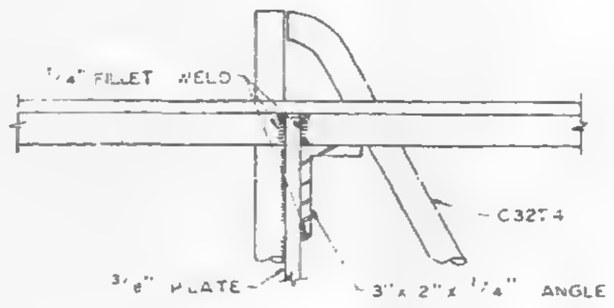
C32T4 TO 3" x 2" CONNECTION DETAIL (15-C)


C32T6
1" x 3/16" FILLET WELD (W.T.C. 230)
5" x 1/4" FILLET WELD (W.T.C. 230)
1 3/4" x 3/16" FILLET WELD (W.T. 230)
1 1/4"
1 1/2"
1 1/2"
1 1/2"
1" x 3/16" FILLET WELD (W.T.C. 230)
3/8" PL. P52 2
C32T4

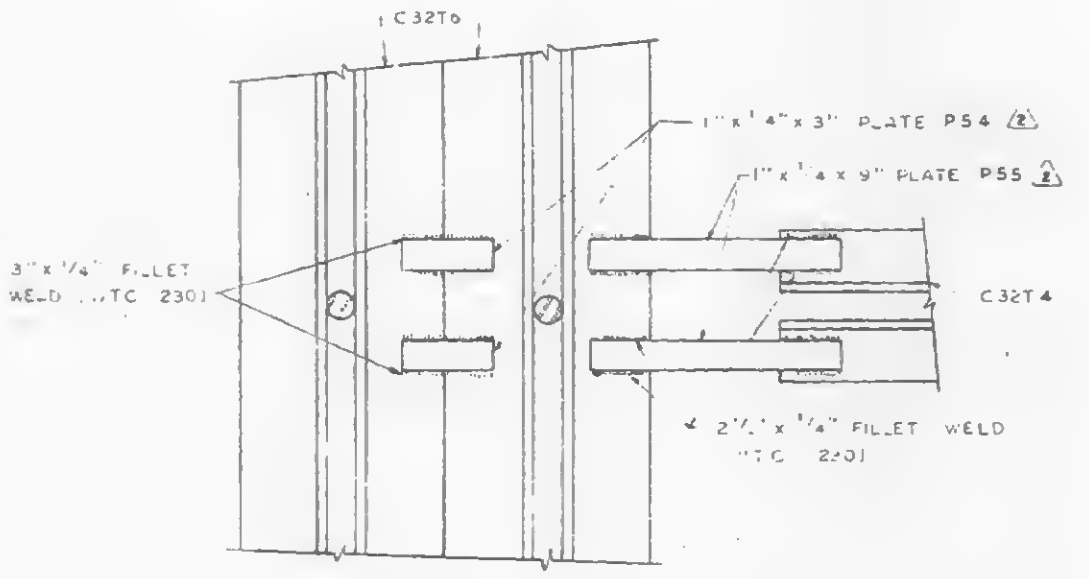
1 SECTION A-A


2" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2" x 4 1/2 x 3/8" PL.
1/4" FILLET WELD (W.T.C. 223)
3 1/4"
3 1/4"
1/4" FILLET WELD (W.T.C. 221)
3" x 2" ∠
C32T4

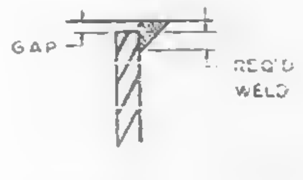
1 SECTION B-B



SECTION C-C


C32T6
1" x 1/4" x 3" PLATE P54 2
1" x 1/4 x 9" PLATE P55 2
3" x 1/4" FILLET WELD (W.T.C. 230)
C32T4
2 1/4" x 1/4" FILLET WELD (W.T.C. 230)

SECTION D-D



DETAIL "A"

REF. DRWG. 2
7-A84-12 7-22-68
7-A84-13.2 10-15-68
7-A81-8 7-22-68
7-A81-12 7-22-68

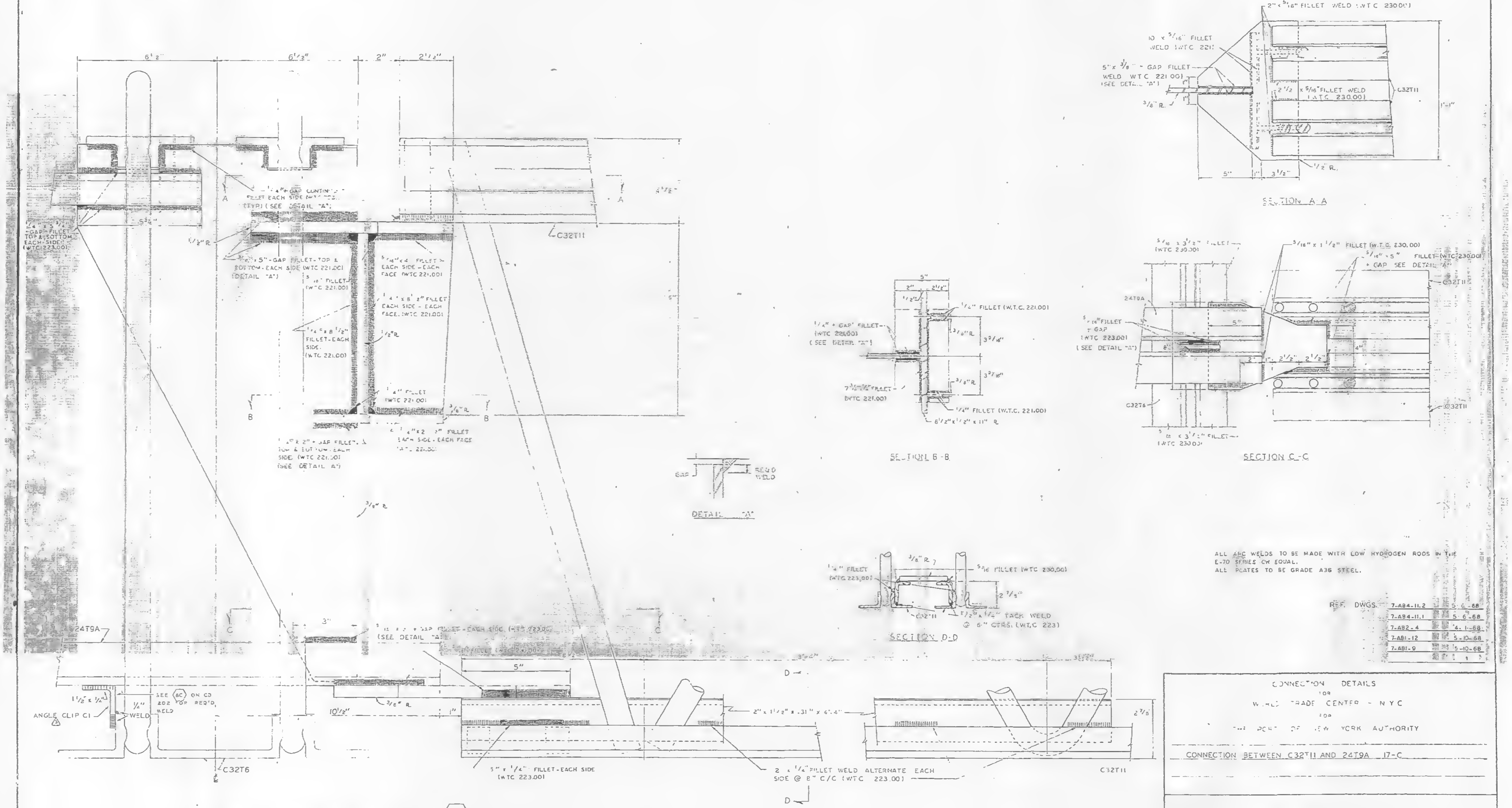
NOTE
1 ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2 ALL PLATES TO BE ASTM A36 1

NO.	DATE	REVISION	BY
2	4-3-69	AS NOTED	R.J.P.
1	6-20-68	WELD, NOTE, DIMENSIONS ADDED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T4 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 15-C

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A84-121 5-17-68 PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A. DATE 4/15/69
DRAWN BY: [illegible] DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M. CHURA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 205


6'1/2"
6'1/2"
2"
2'1/2"
1/4" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223) (TYP) (SEE DETAIL "A")
A
A
5'1/2"
5 3/4"
1/4" x 5 3/4" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
1/2" R
3/16" x 5" + GAP FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00) (DETAIL "A")
3/16" FILLET (WTC 221.00)
5/16" x 4" FILLET - EACH SIDE - EACH FACE (WTC 221.00)
1/4" x 8 1/2" FILLET EACH SIDE - EACH FACE (WTC 221.00)
1/4" x 8 1/2" FILLET - EACH SIDE. (WTC 221.00)
1/2" R
1/4" FILLET (WTC 221.00)
3/16" R
B
B
1/4" x 2" + GAP FILLET TOP & BOTTOM - EACH SIDE (WTC 221.00) (SEE DETAIL A")
1/4" x 2 1/2" FILLET EACH SIDE - EACH FACE (WTC 221.00)
3/8" R
C32T11
24T9A
C
C
3"
(SEE DETAIL "A")
5"
3/8" R
10 1/2"
1"
1 1/2" x 1/2"
ANGLE CLIP C1
3
1/4"
WELD
SEE 6C ON CD 202 FOR REQ'D WELD
C32T6
5" x 1/4" FILLET - EACH SIDE (WTC 223.00)
D
D
2" x 1 1/2" x .31" x 4'.4"
2 x 1/4" FILLET WELD ALTERNATE EACH SIDE @ 8" C/C (WTC 223.00)
2 7/8"
C32T11
2" x 5/16" FILLET WELD (WTC 230.00)
10 x 5/16" FILLET WELD (WTC 221)
5" x 3/8" + GAP FILLET WELD WTC 221.00) (SEE DETAIL "A")
1"
1"
3/8" R.
2 1/2 x 5/16" FILLET WELD (WTC 230.00)
C32T11
1'-1"
1/2" R.
5"
1"
3 1/2"
SECTION A-A
5"
2"
2 1/2"
1/2"
1/4" FILLET (W.T.C. 221.00)
1/4" + GAP FILLET (WTC 221.00) (SEE DETAIL "A")
3/16" R
3 7/16"
3 7/16"
3/16" R
1/4" FILLET (WTC 221.00)
1/4" FILLET (W.T.C. 221.00)
6 1/2" x 1/2" x 11" R
SECTION B-B
5/16 x 3 1/2" FILLET (WTC 230.00)
5/16" x 1 1/2" FILLET (W.T.C. 230.00)
5/16" x 5" FILLET (WTC 230.00) + GAP SEE DETAIL "A"
C32T11
24T9A
5/16" FILLET + GAP (WTC 223.00) (SEE DETAIL "A")
5"
8"
2"
1"
2 1/2"
2 1/2"
4"
C32T6
C32T11
5/16 x 3 1/2" FILLET (WTC 230.00)
SECTION C-C
GAP
REQ'D WELD
DETAIL "A"
1/4" FILLET (WTC 223.00)
3/8" R
5/16 FILLET (WTC 230.00)
2 7/8"
C32T11
1/2" x 1/4" TACK WELD @ 6" CTRS. (WTC 223)
SECTION D-D

C32T11 TO 24T9A CONNECTION DETAIL (17-A)

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

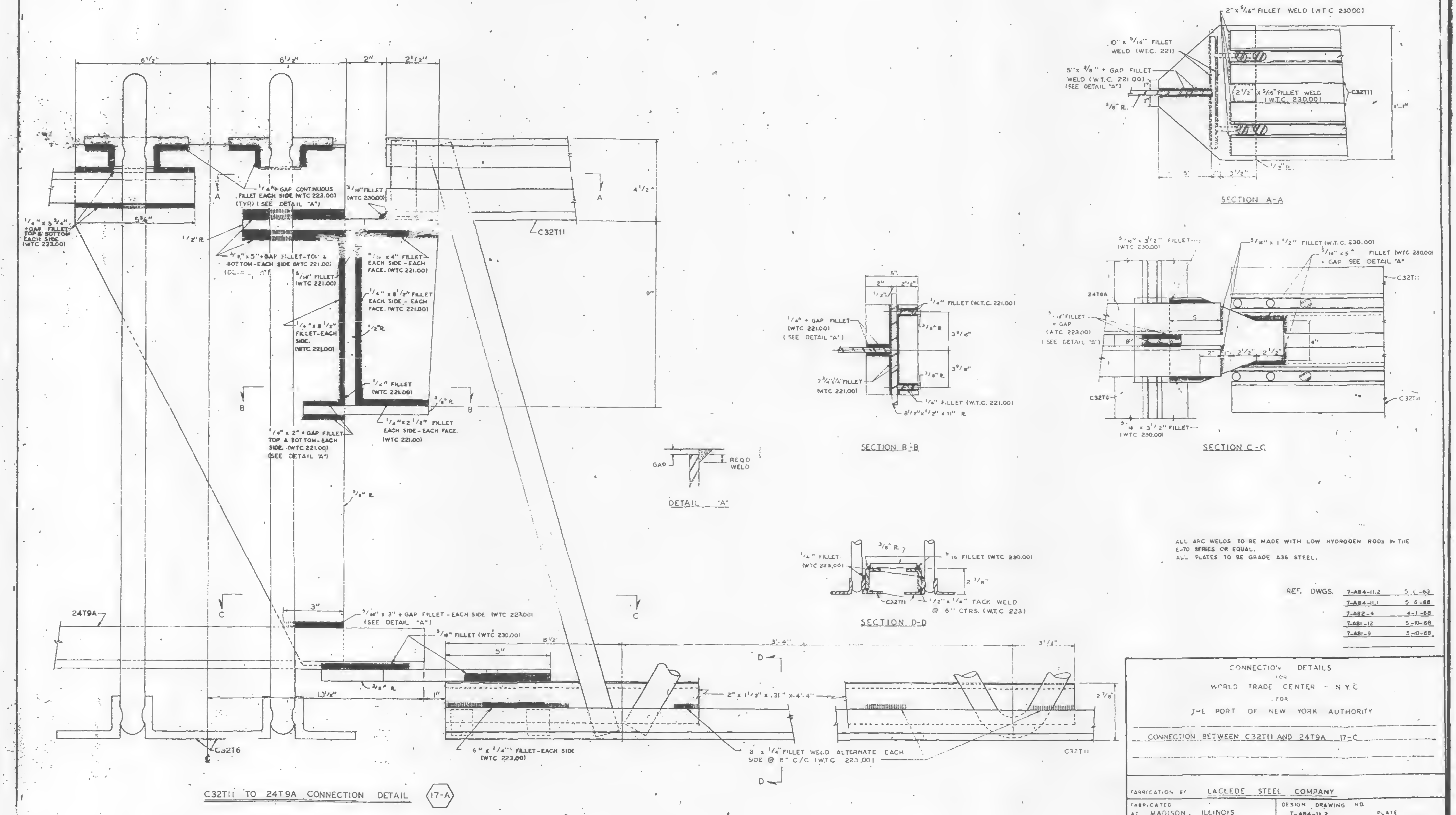
REF. DWGS.	
7-A84-11.2	5-6-68
7-A84-11.1	5-6-68
7-A82-4	4-1-68
7-A81-12	5-10-68
7-A81-9	5-10-68

NO.	DATE	REVISION	BY
3	7-10-68	CLIP ANGLE C1	T.M.C.
2	6-21-68	GENERAL	T.M.C.
1	5-20-68	WELD DETAILS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A84-11.2
PLATE
APPROVED FOR FABRICATION FOR PONYA BY JW DATE 7/12/68
DRAWN BY gdc DATE MAY 14, 1968
CHECKED BY T.M.CHURA DATE MAY 15, 1968
IN CHARGE OF PROD. DEV.
221
SHEET NO. CD 206


6 1/2"
6 1/2"
2"
2 1/2"
4 1/2"
9"
A
A
B
B
C
C
D
D
5 3/4"
1/4" x 3 3/4" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
1/4" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00) (TYP.) (SEE DETAIL "A")
3/16" FILLET (WTC 230.00)
C32T11
1/2" R.
3/8" x 5" + GAP FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
1/4" x 8 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 8 1/2" FILLET - EACH SIDE. (WTC 221.00)
1/2" R.
1/4" FILLET (WTC 221.00)
3/8" R.
1/4" x 2 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 2" + GAP FILLET TOP & BOTTOM - EACH SIDE. (WTC 221.00) (SEE DETAIL "A")
3/8" R.
24T9A
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00) (SEE DETAIL "A")
5/16" FILLET (WTC 230.00)
8 1/2"
5"
3' 4"
3 1/2"
2 7/8"
3/8" R.
1 1/2"
1"
2" x 1 1/2" x .31" x 4' 4"
C32T6
6" x 1/4" FILLET - EACH SIDE (WTC 223.00)
2" x 1/4" FILLET WELD ALTERNATE EACH SIDE @ 8" C/C (W.T.C. 223.00)
C32T11
17-A
GAP
REQD WELD
2" x 5/16" FILLET WELD (W.T.C. 230.00)
10" x 5/16" FILLET WELD (W.T.C. 221)
5" x 3/8" + GAP FILLET WELD (W.T.C. 221.00) (SEE DETAIL "A")
1"
1"
3/8" R.
2 1/2" x 5/16" FILLET WELD (W.T.C. 230.00)
C32T11
1'-1"
5"
1"
3 1/2"
1/2" R.
5"
2"
2 1/2"
1/2"
1/4" FILLET (W.T.C. 221.00)
1/4" + GAP FILLET (WTC 221.00) (SEE DETAIL "A")
3/8" R.
3 9/16"
3 9/16"
3/8" R.
7 3/4" x 1/4" FILLET (WTC 221.00)
1/4" FILLET (W.T.C. 221.00)
8 1/2" x 1/2" x 11" R.
5/16" x 3 1/2" FILLET (WTC 230.00)
5/16" x 1 1/2" FILLET (W.T.C. 230.00)
5/16" x 5" FILLET (WTC 230.00) + GAP SEE DETAIL "A"
C32T11
24T9A
5/16" FILLET + GAP (WTC 223.00) (SEE DETAIL "A")
5
8"
4"
2"
1"
2 1/2"
2 1/2"
C32T8
C32T11
5/16" x 3 1/2" FILLET (WTC 230.00)
1/4" FILLET (WTC 223.00)
3/8" R.
5/16 FILLET (WTC 230.00)
2 7/8"
C32T11
1/2" x 1/4" TACK WELD @ 6" CTRS. (W.T.C. 223)

C32T11 TO 24T9A CONNECTION DETAIL (17-A)

SECTION A-A

SECTION B-B

SECTION C-C

DETAIL "A"

SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.		
	7-AB4-11.2	5-6-68
	7-AB4-11.1	5-6-68
	7-AB2-4	4-1-68
	7-AB1-12	5-10-68
	7-AB1-9	5-10-68

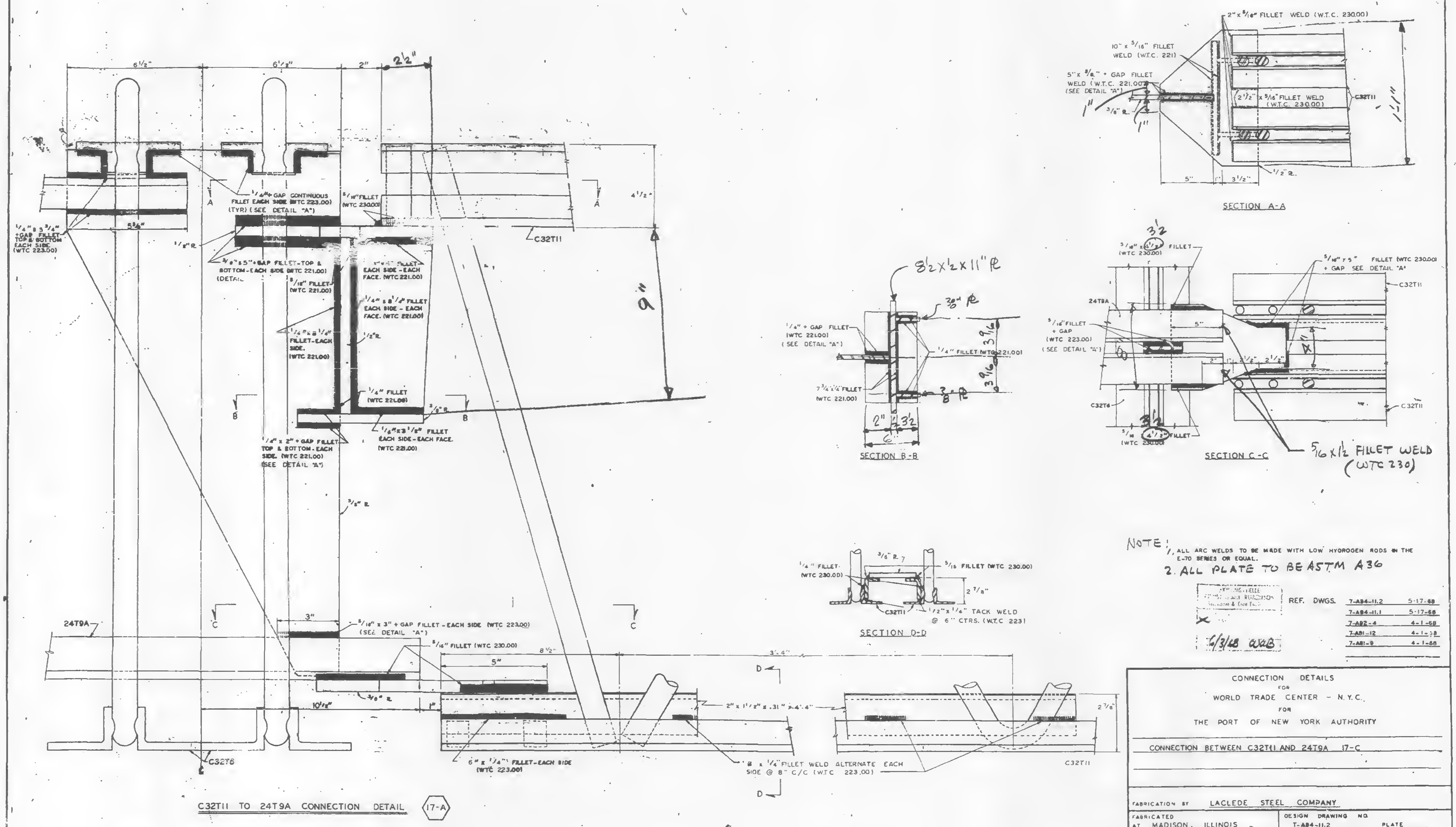
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. T-AB4-11.2	PLATE
APPROVED FOR FABRICATION FOR PONYA BY JW	DATE 6/25/68	DRAWN BY gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION FOR FABRICATOR BY LACLEDE STEEL CO.	DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 206

NO	DATE	REVISION	BY
2	6-21-68	GENERAL	T.M.C.
1	5-20-68	WELD DETAILS	L.W.H.


6 1/2"
6 1/2"
2"
2 1/2"
1/4" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00) (TYP.) (SEE DETAIL "A")
5/16" FILLET (WTC 230.00)
4 1/2"
A
C32T11
1/4" x 5 3/4" +GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
5 3/4"
1/2" R.
3/8" x 5" +GAP FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.00) (DETAIL
FILLET-EACH SIDE-EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
1/4" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 8 1/4" FILLET-EACH SIDE. (WTC 221.00)
1/2" R.
a"
1/4" FILLET (WTC 221.00)
3/8" R.
B
1/4" x 2" + GAP FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.00) (SEE DETAIL "A")
1/4" x 3 1/2" FILLET EACH SIDE-EACH FACE. (WTC 221.00)
3/8" R.
24T9A
C
3"
5/16" x 3" + GAP FILLET-EACH SIDE (WTC 223.00) (SEE DETAIL "A")
5/16" FILLET (WTC 230.00)
8 1/2"
5"
3'-4"
D
3/8" R.
10 1/8"
1"
2" x 1 1/2" x .31" x 4'-4"
2 7/8"
C32T6
6" x 1/4" FILLET-EACH SIDE (WTC 223.00)
8 x 1/4" FILLET WELD ALTERNATE EACH SIDE @ 8" C/C (WTC 223.00)
C32T11
2" x 5/16" FILLET WELD (W.T.C. 230.00)
10" x 5/16" FILLET WELD (W.T.C. 221)
5" x 3/8" + GAP FILLET WELD (W.T.C. 221.00) (SEE DETAIL "A")
1"
3/8" R.
1"
2 1/2" x 5/16" FILLET WELD (W.T.C. 230.00)
C32T11
11"
5"
1"
3 1/2"
1/2" R.
8 1/2 x 1/2 x 11" PL
3/8" PL
1/4" + GAP FILLET (WTC 221.00) (SEE DETAIL "A")
1/4" FILLET (WTC 221.00)
3 9/16
3 9/16
7 3/4" x 1/4" FILLET (WTC 221.00)
3/8" PL
2"
1/2
3 1/2
6"
3 1/2
5/16" x 4 1/2" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00) + GAP SEE DETAIL "A"
C32T11
24T9A
5/16" FILLET + GAP (WTC 223.00) (SEE DETAIL "A")
5"
6
4"
2"
1"
2 1/2"
2 1/2"
C32T6
C32T11
3 1/2
5/16 x 4 1/2" FILLET (WTC 230.00)
5/16 x 1 1/2 FILLET WELD (WTC 230)
1/4" FILLET (WTC 230.00)
3/8" R.
5/16 FILLET (WTC 230.00)
2 7/8"
C32T11
1/2" x 1/4" TACK WELD @ 6" CTRS. (W.T.C 223)

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

C32T11 TO 24T9A CONNECTION DETAIL (17-A)

NOTE:
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATE TO BE ASTM A36

6/3/68 WAB

REF. DWGS.	
7-AB4-11.2	5-17-68
7-AB4-11.1	5-17-68
7-AB2-4	4-1-68
7-AB1-12	4-1-68
7-AB1-9	4-1-68

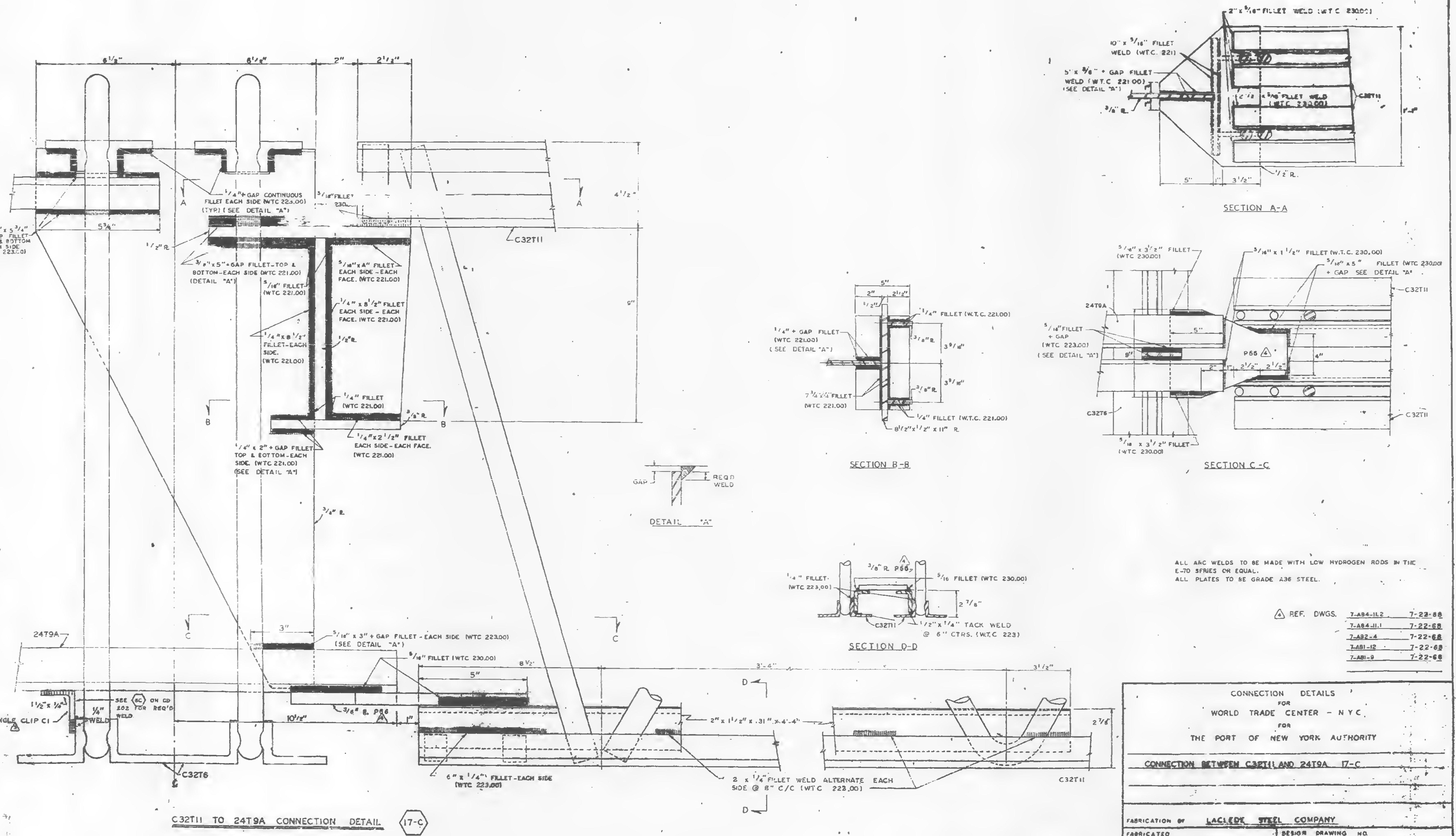
NO.	DATE	REVISION	BY
1	5-20-68	WELD DETAILS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. T-AB4-11.2	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY: gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A C WEBER		FABRICATION CONT. NO. W T C 221	SHEET NO. CD 206


6 1/2"
6 1/2"
2"
2 1/2"
5 3/4"
4 1/2"
9"
A
B
C
D
1/4" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00) (TYP) (SEE DETAIL "A")
5/16" FILLET 230.00
C32T11
1/4" x 5 3/4" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
1/2" R
3/8" x 5" + GAP FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" FILLET (WTC 221.00)
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 8 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 8 1/2" FILLET - EACH SIDE. (WTC 221.00)
1/4" FILLET (WTC 221.00)
3/8" R
1/4" x 2 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 2" + GAP FILLET TOP & BOTTOM - EACH SIDE. (WTC 221.00) (SEE DETAIL "A")
3/4" R
GAP
REQ'D WELD
DETAIL "A"
24T9A
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00) (SEE DETAIL "A")
5/16" FILLET (WTC 230.00)
8 1/2"
5"
3'-4"
3 1/2"
2 7/8"
1 1/2" x 1/4"
ANGLE CLIP C1
SEE 8C ON CD 202 FOR REQ'D WELD
1/4" WELD
10 1/2"
3/8" R P56
1"
C32T6
6" x 1/4" FILLET - EACH SIDE (WTC 223.00)
2" x 1 1/2" x .31" x 4'-4"
2 x 1/4" FILLET WELD ALTERNATE EACH SIDE @ 8" C/C (WTC 223.00)
C32T11
C32T11 TO 24T9A CONNECTION DETAIL 17-C
2" x 5/16" FILLET WELD (W.T.C. 230.00)
10" x 5/16" FILLET WELD (W.T.C. 221)
5" x 3/8" + GAP FILLET WELD (W.T.C. 221.00) (SEE DETAIL "A")
3/8" R
2 1/2" x 5/16" FILLET WELD (W.T.C. 230.00)
C32T11
1'-8"
5"
1"
3 1/2"
1/2" R.
SECTION A-A
5"
2"
2 1/2"
1/2"
1/4" FILLET (W.T.C. 221.00)
1/4" + GAP FILLET (WTC 221.00) (SEE DETAIL "A")
3/8" R
3 9/16"
3 9/16"
7 3/4" x 1/4" FILLET (WTC 221.00)
1/4" FILLET (W.T.C. 221.00)
8 1/2" x 1/2" x 11" R
SECTION B-B
5/16" x 3 1/2" FILLET (WTC 230.00)
5/16" x 1 1/2" FILLET (W.T.C. 230.00)
5/16" x 5" FILLET (WTC 230.00) + GAP SEE DETAIL "A"
C32T11
24T9A
5/16" FILLET + GAP (WTC 223.00) (SEE DETAIL "A")
8"
5"
P56
4"
2"
1"
2 1/2"
2 1/2"
C32T6
5/16" x 3 1/2" FILLET (WTC 230.00)
C32T11
SECTION C-C
1/4" FILLET (WTC 223.00)
3/8" R. P56
5/16 FILLET (WTC 230.00)
2 7/8"
C32T11
1/2" x 1/4" TACK WELD @ 6" CTRS. (W.T.C. 223)
SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

△4 REF. DWGS.

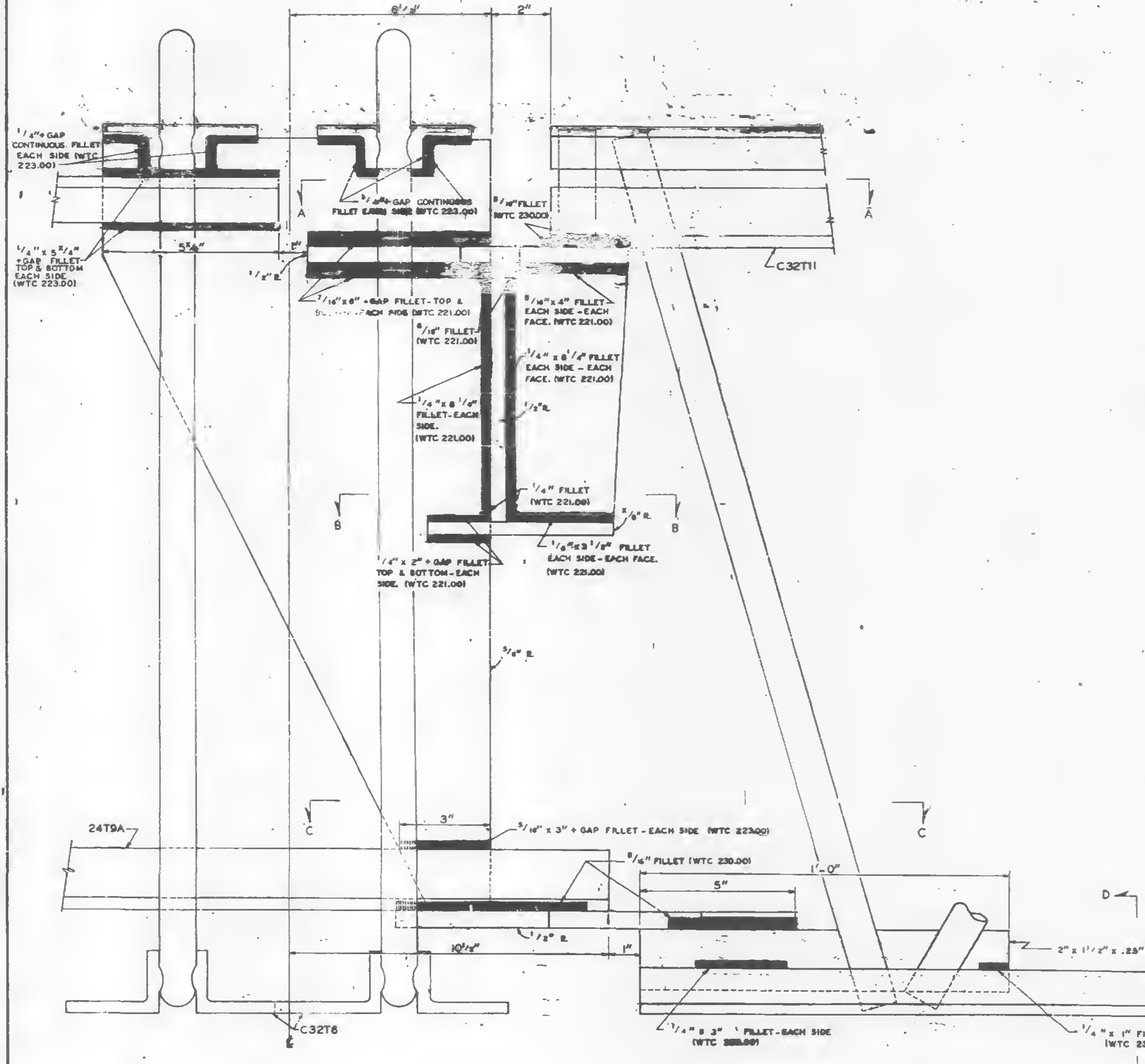
7-A84-11.2	7-22-68
7-A84-11.1	7-22-68
7-A82-4	7-22-68
7-A81-12	7-22-68
7-A81-9	7-22-68

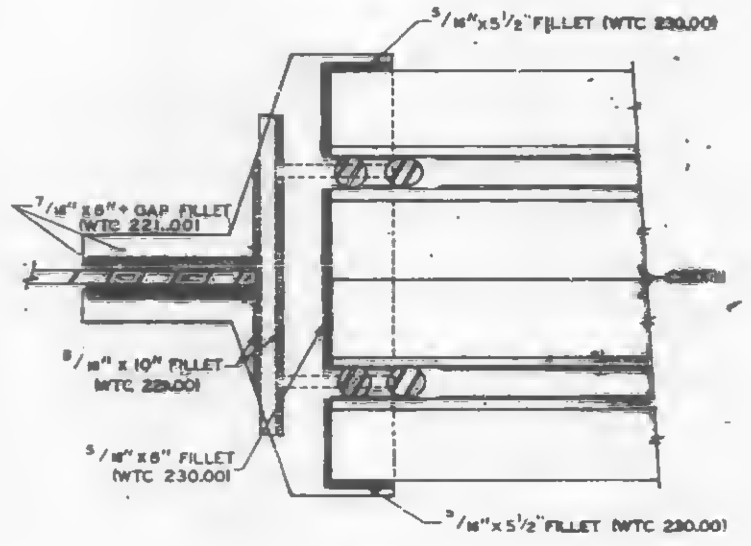
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

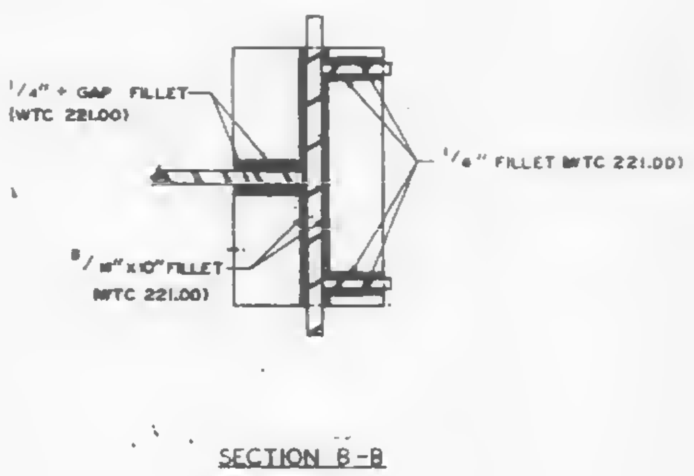
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A84-11.2
PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A James White Jr. DATE 4/11/69
DRAWN BY. gdo DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M.CIRRA DATE MAY 15, 1968
IN CHARGE OF PROD. RRL
LACLEDE STEEL CO.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W T C 221
SHEET NO. CD 206

NO.	DATE	REVISION	BY
△4	4-3-69	AS NOTED	R.J.P.
△3	7-10-68	ANGLE CLIP C1	T.M.C.
△2	8-21-68	GENERAL	T.M.C.
△1	5-20-68	WELD DETAILS	L.W.H.

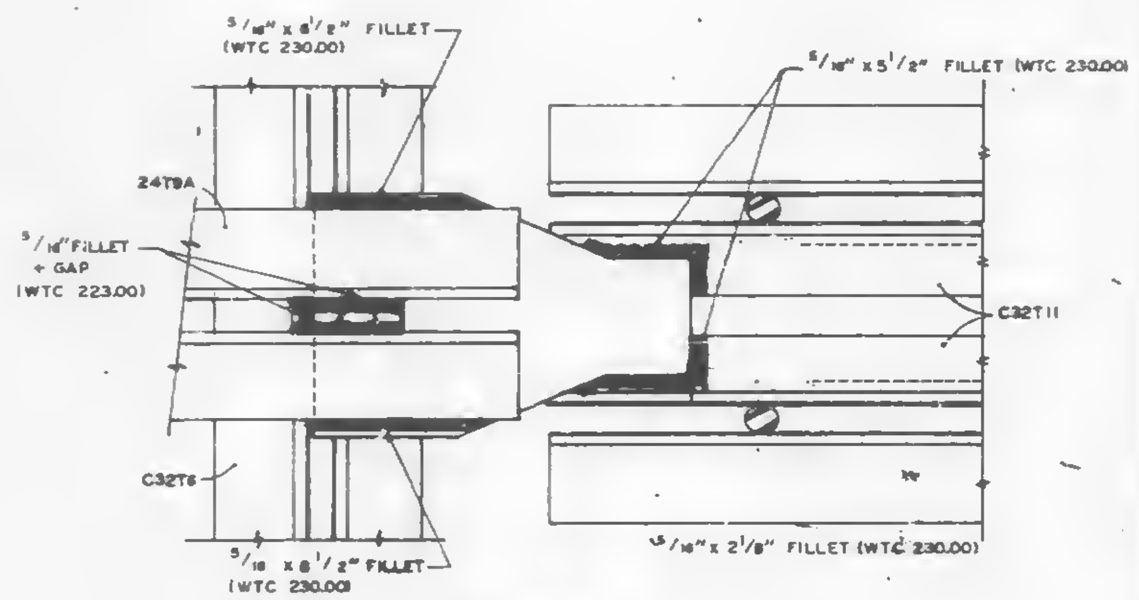

6½"
2"
¼" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00)
5/16" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00)
5/16" FILLET (WTC 230.00)
A
A
C32T11
¼" x 5¾" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
5¾"
1"
½" R.
7/16" x 8" + GAP FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.00)
5/16" x 4" FILLET-EACH SIDE-EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
¼" x 8¼" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
¼" x 8¼" FILLET-EACH SIDE. (WTC 221.00)
½" R.
¼" FILLET (WTC 221.00)
B
B
⅜" R.
¼" x 2" + GAP FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.00)
⅛" x 3½" FILLET EACH SIDE-EACH FACE. (WTC 221.00)
⅝" R.
24T9A
C
C
3"
5/16" x 3" + GAP FILLET-EACH SIDE (WTC 223.00)
5/16" FILLET (WTC 230.00)
1'-0"
5"
½" R.
10½"
1"
D
D
2" x 1½" x .25" ∠
C32T6
℄
¼" x 3" FILLET-EACH SIDE (WTC 230.00)
¼" x 1" FILLET-EACH SIDE (WTC 230.00)


5/16" x 5½" FILLET (WTC 230.00)
7/16" x 8" + GAP FILLET (WTC 221.00)
5/16" x 10" FILLET (WTC 221.00)
5/16" x 8" FILLET (WTC 230.00)
5/16" x 5½" FILLET (WTC 230.00)

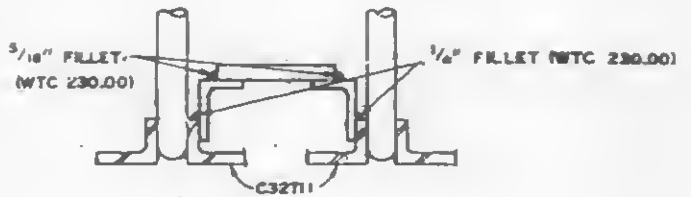
SECTION A-A



SECTION B-B


5/16" x 8½" FILLET (WTC 230.00)
5/16" x 5½" FILLET (WTC 230.00)
24T9A
5/16" FILLET + GAP (WTC 223.00)
C32T11
C32T6
5/16" x 8½" FILLET (WTC 230.00)
5/16" x 2⅛" FILLET (WTC 230.00)

SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

REF. DWGS.

7-AB4-11.2	5-8-68
7-AB4-11.1	5-8-68
7-AB2-4	4-1-68
7-AB1-12	4-1-68
7-AB1-9	4-1-68

VOID

5-17-68

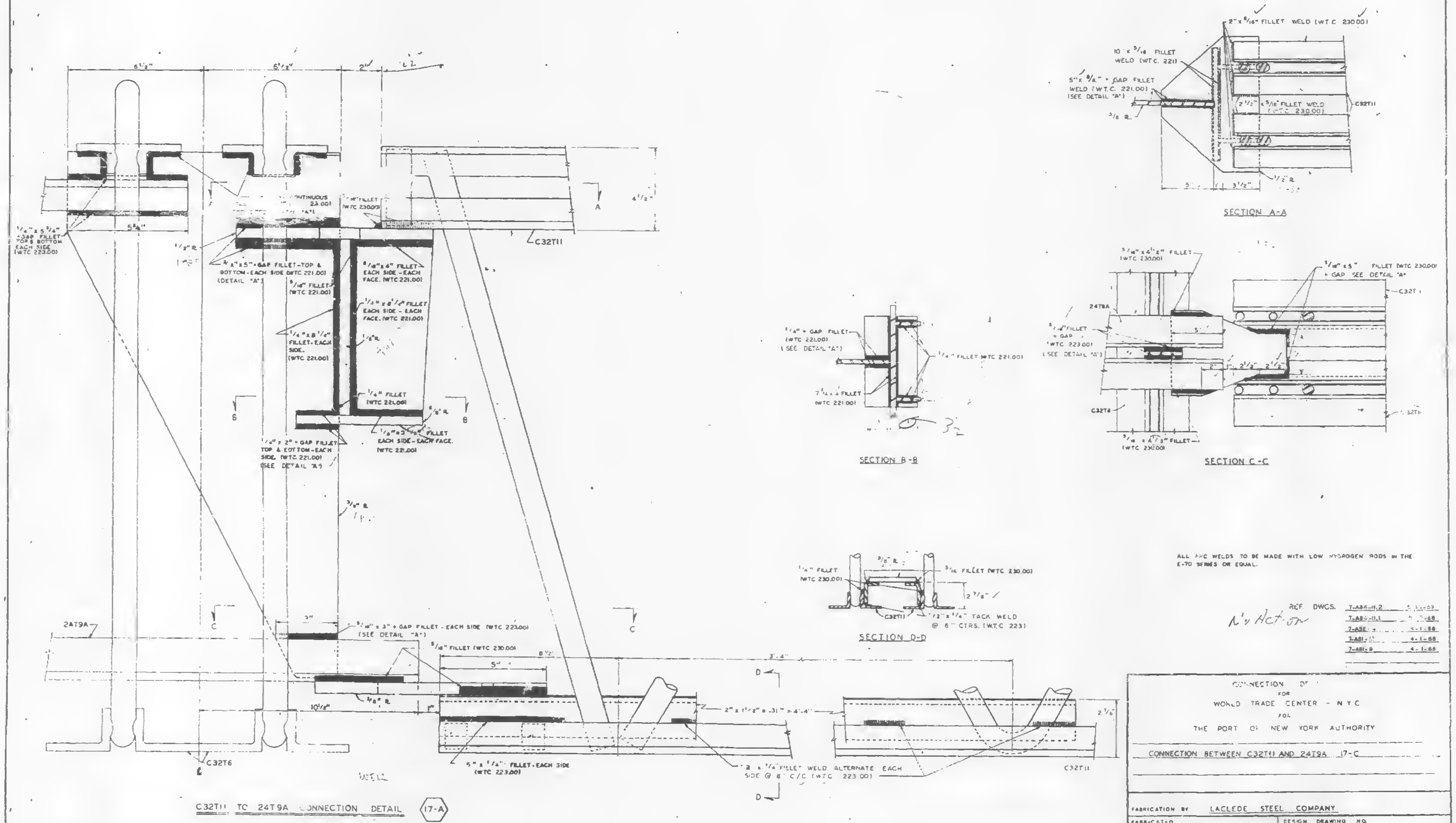
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-11.2	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY: gdc DATE MAY 13, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A C WEBER		FABRICATION CONT. NO. W.T.C 221	SHEET NO. CD 206

NO.	DATE	REVISION	BY


6 1/2"
6 1/2"
2"
4 1/2"
5 3/4"
A
C32T11
1/4" x 5 3/4" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
1/2" R
CONTINUOUS 23.00)
1/4" FILLET (WTC 230.00)
3/8" x 5" + GAP FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" FILLET (WTC 221.00)
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 8 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
1/4" x 8 1/2" FILLET - EACH SIDE. (WTC 221.00)
1/8" R
1/4" FILLET (WTC 221.00)
B
B
5/8" R
1/4" x 2" + GAP FILLET TOP & BOTTOM - EACH SIDE. (WTC 221.00) (SEE DETAIL "A")
1/4" x 2 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
3/8" R
24T9A
C
C
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00) (SEE DETAIL "A")
5/16" FILLET (WTC 230.00)
8 1/2"
5"
3'-4"
D
D
3/8" R
10 1/2"
1"
2" x 1 1/2" x .31" x 4'-4"
2 7/8"
C32T6
C32T11
5" x 1/4" FILLET - EACH SIDE (WTC 223.00)
2 x 1/4" FILLET WELD ALTERNATE EACH SIDE @ 8" C/C (WTC 223.00)
WELL
2" x 5/16" FILLET WELD (WTC 230.00)
10 x 5/16 FILLET WELD (WTC 221)
5" x 3/8" + GAP FILLET WELD (W.T.C. 221.00) (SEE DETAIL "A")
3/8 R
2 1/2" x 5/16" FILLET WELD (WTC 230.00)
C32T11
1/2" R
5"
1"
3 1/2"
1/4" + GAP FILLET (WTC 221.00) (SEE DETAIL "A")
1/4" FILLET (WTC 221.00)
7 1/4 x 4 FILLET (WTC 221.00)
3 1/2
5/16" x 4 1/2" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00) + GAP SEE DETAIL "A"
24T9A
C32T11
5/16" FILLET + GAP (WTC 223.00) (SEE DETAIL "A")
5"
2"
2 1/2"
2 1/2"
C32T6
C32T11
5/16 x 4 1/2" FILLET (WTC 230.00)
1/4" FILLET (WTC 230.00)
3/8" R
5/16 FILLET (WTC 230.00)
2 7/8"
C32T11
1/2" x 1/4" TACK WELD @ 6" CTRS. (W.T.C 223)

C32T11 TO 24T9A CONNECTION DETAIL (17-A)

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

N/A Action

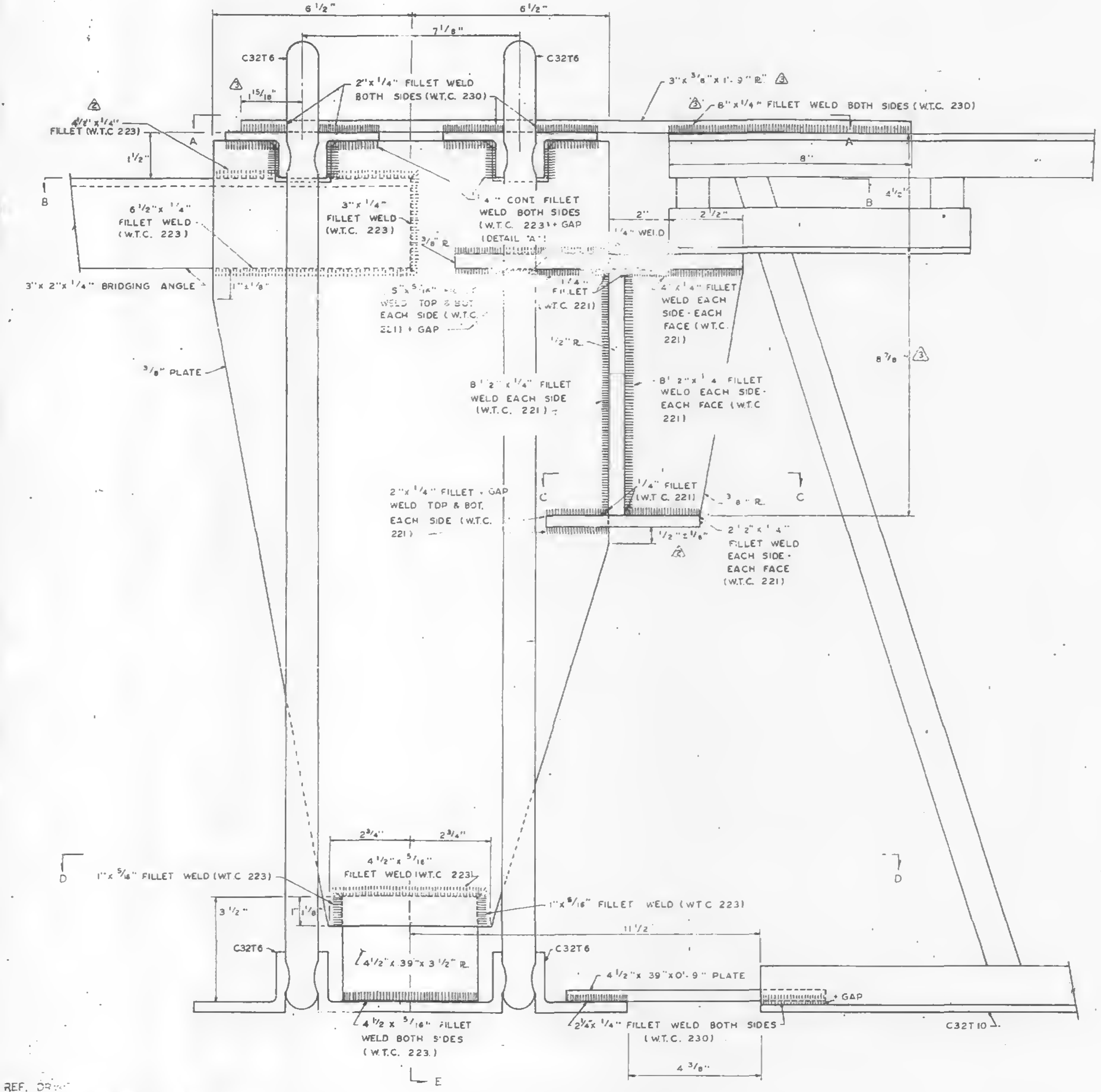
REF. DWGS.	
7-A84-11.2	[illegible]
7-A84-11.1	[illegible]-68
7-A5[illegible]	4-1-68
7-A81-[illegible]	4-1-68
7-A81-9	4-1-68

CONNECTION DE[illegible]
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

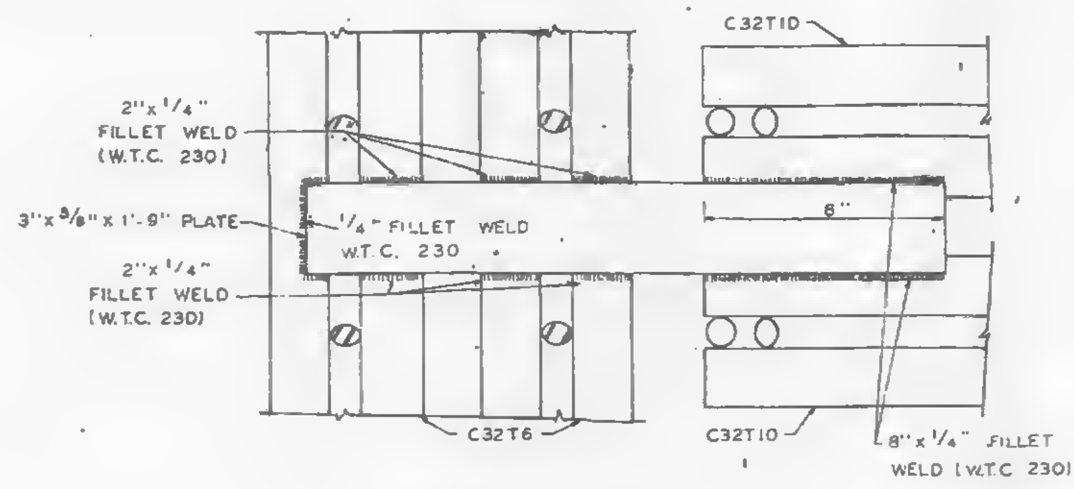
CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY	
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-A84-11.2 PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE	DRAWN BY gdc DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1968 — IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER	FABRICATION CONT. NO. WTC 221 — SHEET NO. CD 206

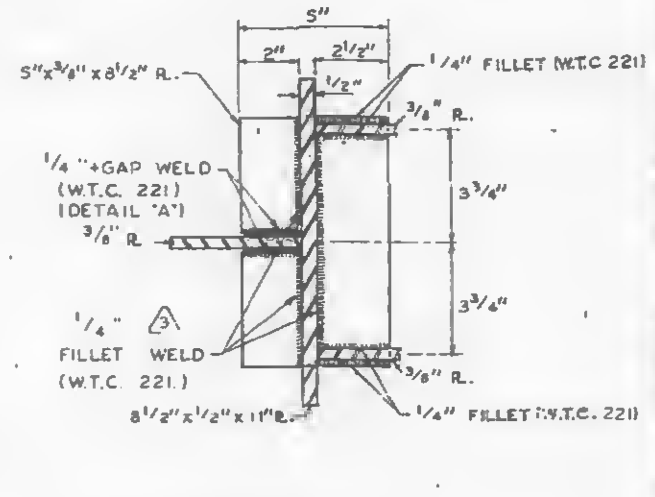
NO.	DATE	REVISION	BY
1	5-20-68	WELD DETAILS	LWH


6 1/2"
7 1/8"
6 1/2"
C32T6
C32T6
2"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
3"x 3/8"x 1'-9" ℞
6"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/4"x 1/4" FILLET (W.T.C 223)
1 1/2"
6 1/2"x 1/4" FILLET WELD (W.T.C. 223)
3"x 1/4" FILLET WELD (W.T.C. 223)
1/4" CONT. FILLET WELD BOTH SIDES (W.T.C. 223) + GAP (DETAIL "A")
1/4" WELD
3"x 2"x 1/4" BRIDGING ANGLE
3/8" PLATE
5"x 5/16" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
1/4" FILLET (W.T.C. 221)
4"x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
8 1/2"x 1/4" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2"x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
8 3/8"
2"x 1/4" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" ℞
2 1/2"x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
2 3/4"
2 3/4"
4 1/2"x 5/16" FILLET WELD (W.T.C. 223)
1"x 5/16" FILLET WELD (W.T.C 223)
1"x 5/16" FILLET WELD (W.T.C 223)
3 1/2"
11 1/2"
4 1/2"x 39"x 3 1/2" ℞
4 1/2"x 39"x 0'-9" PLATE
+ GAP
4 1/2 x 5/16" FILLET WELD BOTH SIDES (W.T.C. 223)
2 1/4"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 3/8"
C32T10
A
B
C
D
E

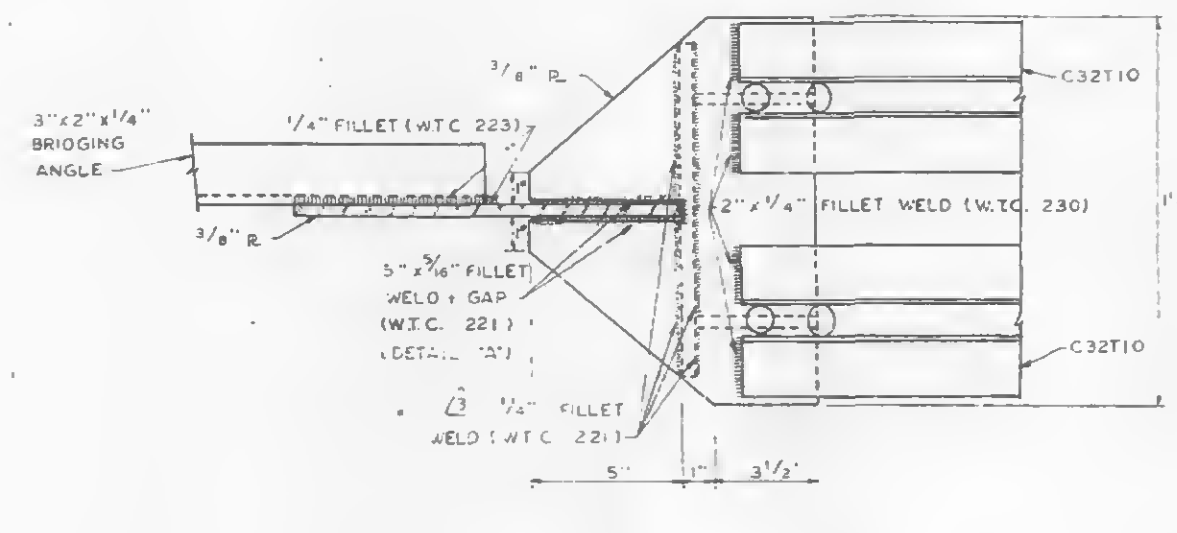
C32T10 TO 3" x 2" CONNECTION DETAIL (14-C)


C32T10
2"x 1/4" FILLET WELD (W.T.C. 230)
3"x 3/8"x 1'-9" PLATE
1/4" FILLET WELD W.T.C. 230
8"
2"x 1/4" FILLET WELD (W.T.C. 230)
C32T6
C32T10
8"x 1/4" FILLET WELD (W.T.C 230)

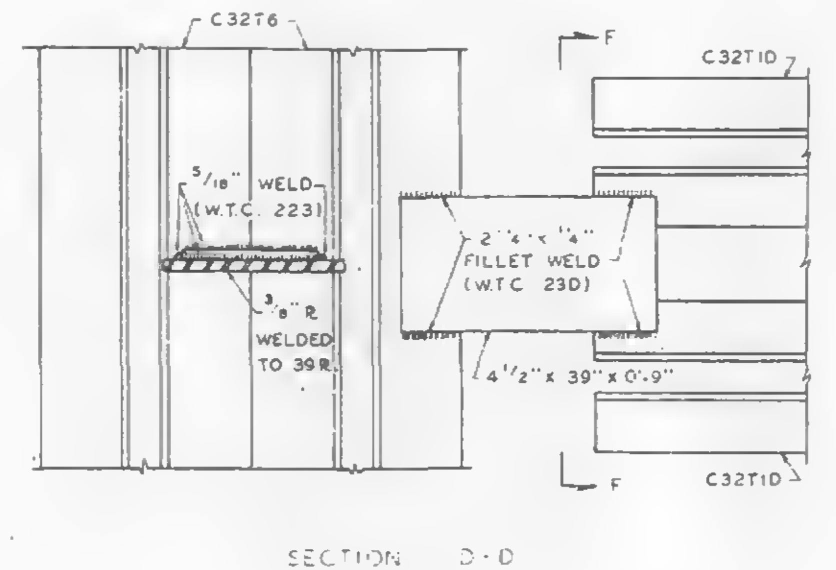
SECTION A - A



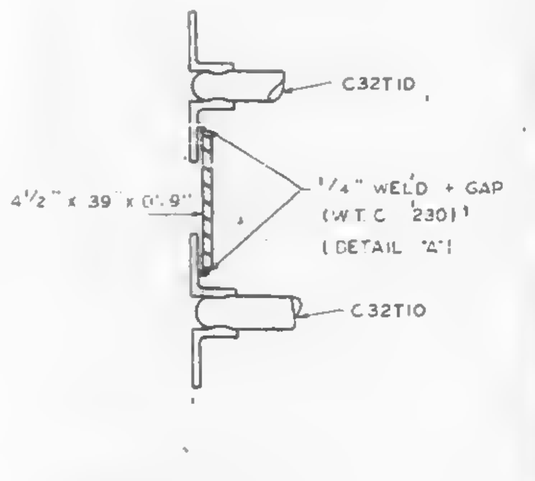
SECTION C - C


3/8" ℞
C32T10
3"x 2"x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C 223)
3/8" ℞
2"x 1/4" FILLET WELD (W.T.C. 230)
1'-1"
5"x 5/16" FILLET WELD + GAP (W.T.C. 221) (DETAIL "A")
1/4" FILLET WELD (W.T.C. 221)
C32T10
5"
1"
3 1/2"

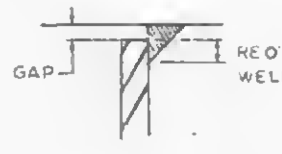
SECTION B - B



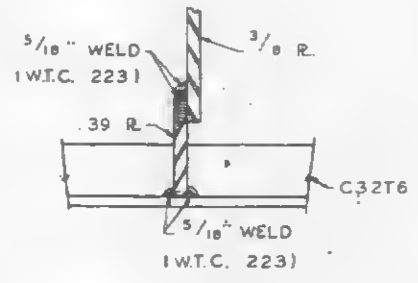
SECTION D - D



SECTION F - F



DETAIL "A"



SECTION E - E

REF. DRAW.

7-A84-13.1	5-6-68
7-A84-13.2	5-6-68
7-A91-8	5-10-68
7-A81-12	5-10-68

NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATES TO BE ASTM A36. ②

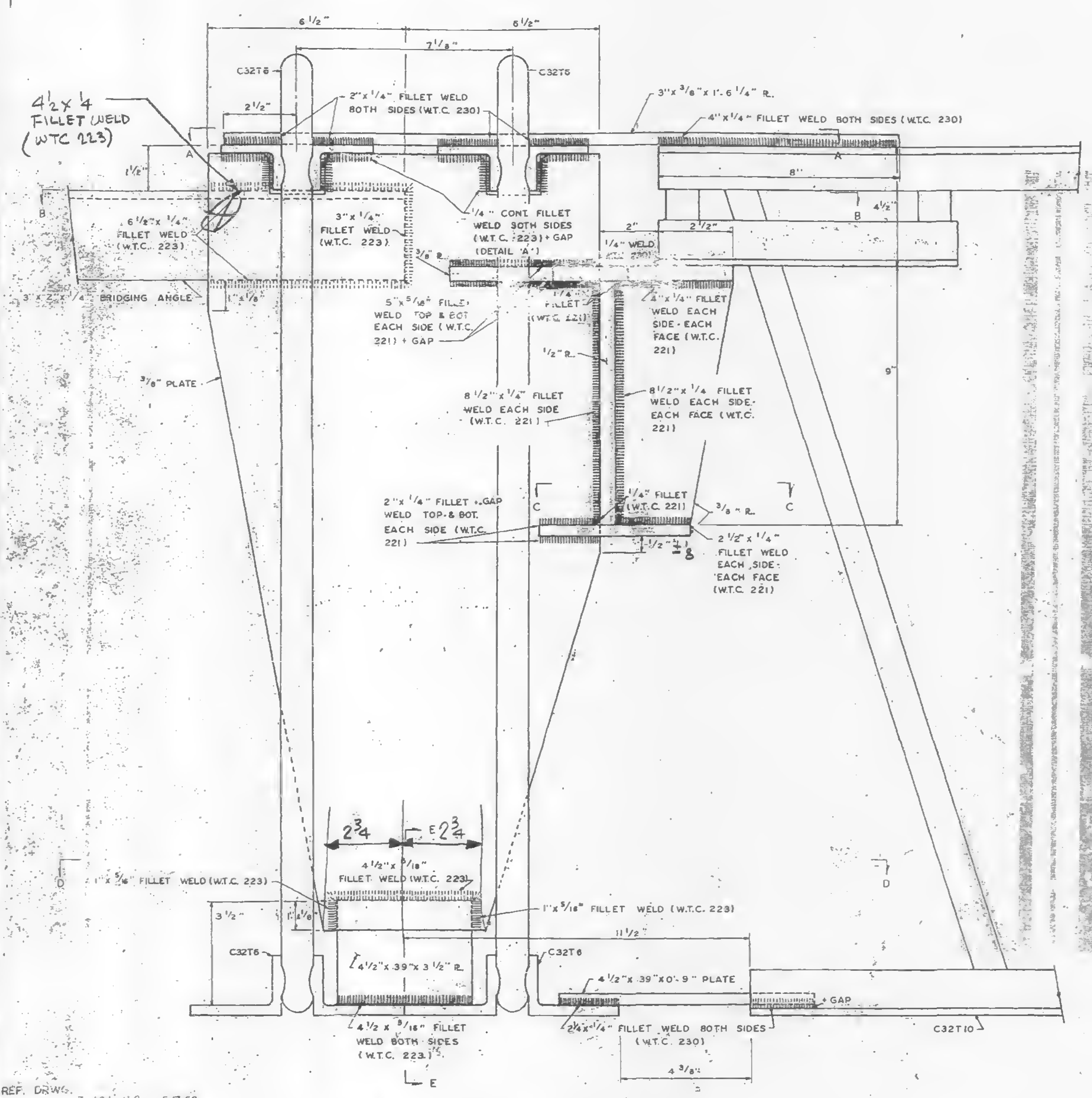
NO.	DATE	REVISION	BY
③	6-20-68	DIMENSION & WELDS	L.W.H.
②	6-6-68	DIMENSIONS ADDED, NOTES	G.D.C.
①	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

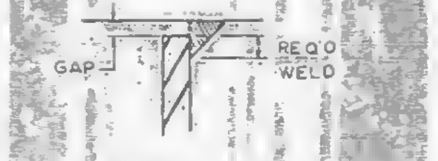
C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

FABRICATION BY: LACLEDE STEEL COMPANY

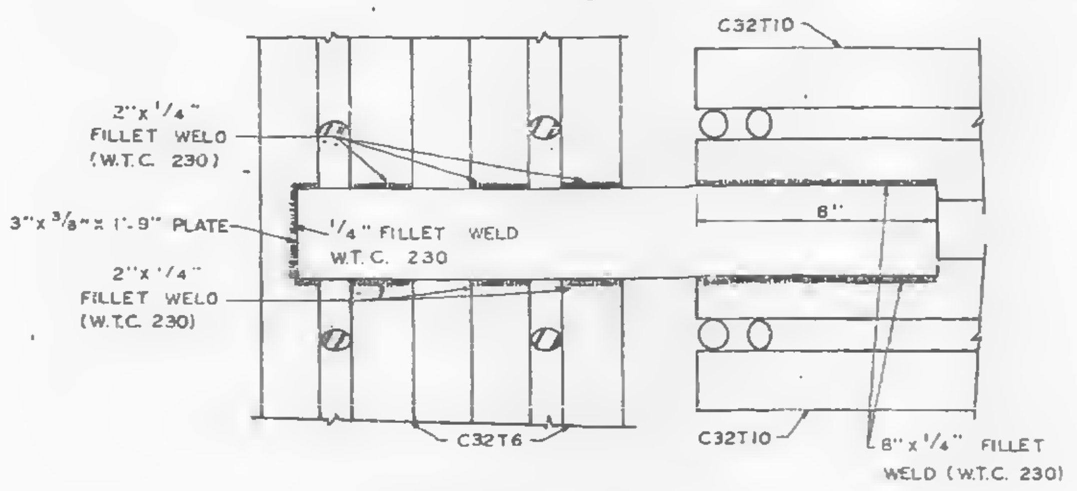
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13.1 5-6-68 PLATE	
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A.	DATE 6/25/68	DRAWN BY: L.W.H. DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ___ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD 207


4½ x ¼
FILLET WELD
(WTC 223)
6½"
6½"
7⅛"
C32T6
C32T6
2½"
2"x¼" FILLET WELD BOTH SIDES (W.T.C. 230)
3"x⅜"x 1'-6¼" R.
4"x¼" FILLET WELD BOTH SIDES (W.T.C. 230)
A
A
1½"
B
B
8"
4½"
6½"x¼" FILLET WELD (W.T.C. 223)
3"x¼" FILLET WELD (W.T.C. 223)
¼" CONT. FILLET WELD BOTH SIDES (W.T.C. 223) + GAP (DETAIL 'A')
2"
2½"
¼" WELD
⅜" R.
3"x2"x¼" BRIDGING ANGLE
1"x⅛"
5"x5/16" FILLET WELD TOP & BOT EACH SIDE (W.T.C. 221) + GAP
¼" FILLET (W.T.C. 221)
4"x¼" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
½" R.
⅜" PLATE
9"
8½"x¼" FILLET WELD EACH SIDE (W.T.C. 221)
8½"x¼ FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
2"x¼" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
C
C
¼" FILLET (W.T.C. 221)
⅜" R.
2½"x¼" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
½" ±⅛
2¾
2¾
E
D
D
1"x5/16" FILLET WELD (W.T.C. 223)
4½"x5/16" FILLET WELD (W.T.C. 223)
1"x5/16" FILLET WELD (W.T.C. 223)
3½"
1⅛"
C32T6
C32T6
11½"
4½"x.39"x3½" R.
4½"x.39"x0'-9" PLATE
GAP
4½ x 5/16" FILLET WELD BOTH SIDES (W.T.C. 223)
2¼"x¼" FILLET WELD BOTH SIDES (W.T.C. 230)
4⅜"
C32T10
E

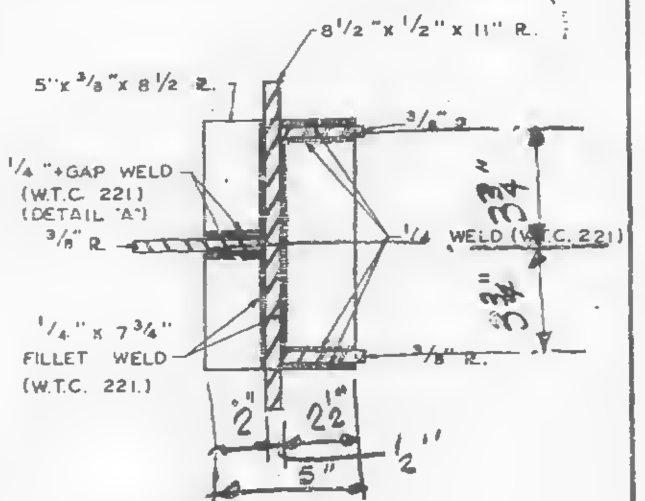
C32T10 TO 3" x 2" CONNECTION DETAIL (14-C)



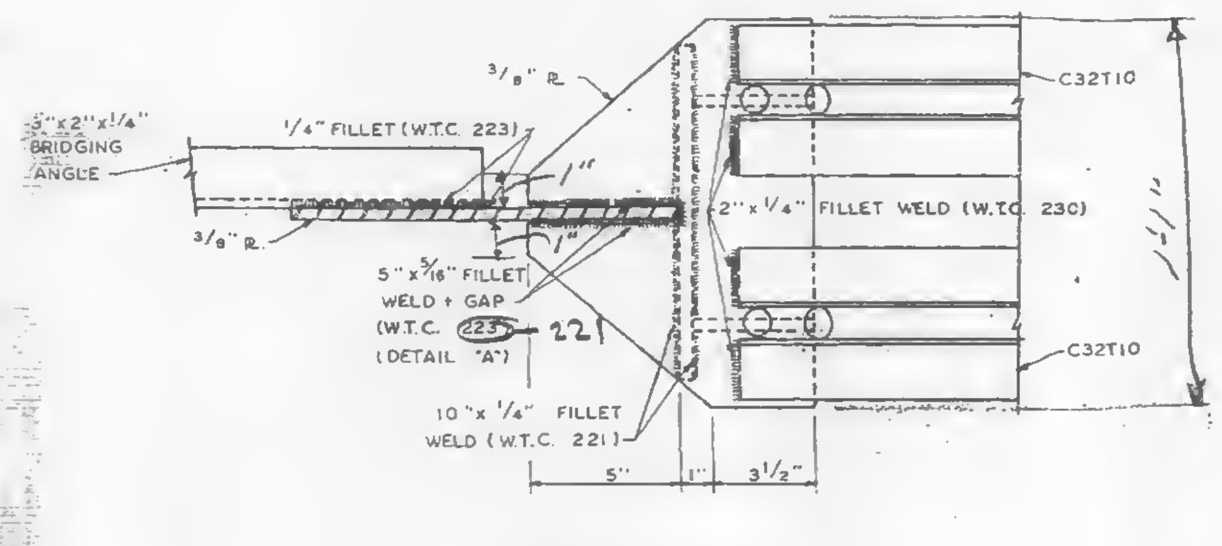
DETAIL "A"


C32T10
2"x¼" FILLET WELD (W.T.C. 230)
3"x⅜"x 1'-9" PLATE
¼" FILLET WELD W.T.C. 230
8"
2"x¼" FILLET WELD (W.T.C. 230)
C32T6
C32T10
8"x¼" FILLET WELD (W.T.C. 230)

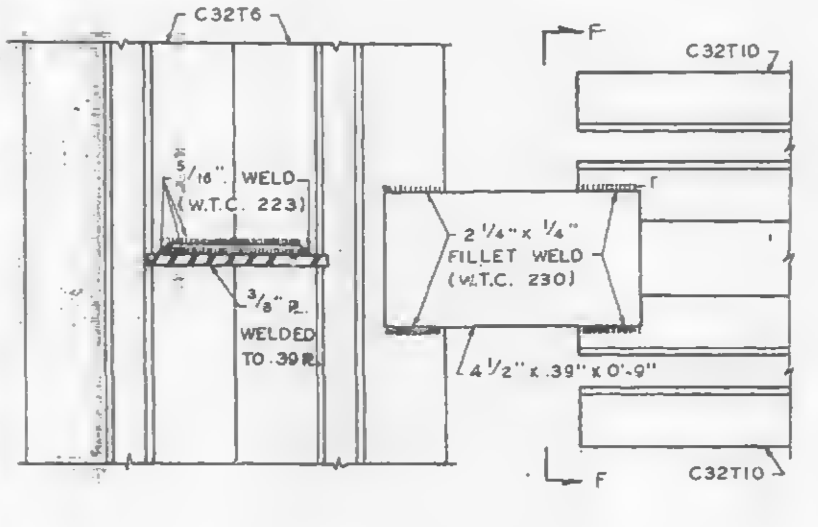
SECTION A-A



SECTION C-C

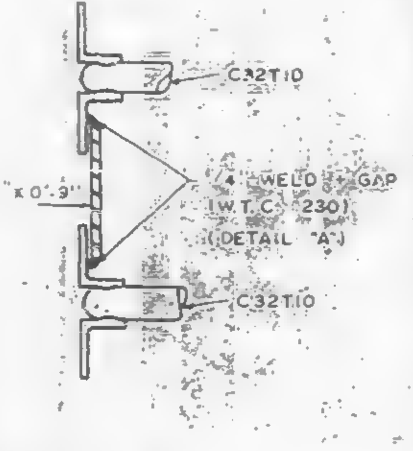

⅜" R.
C32T10
3"x2"x¼" BRIDGING ANGLE
¼" FILLET (W.T.C. 223)
1"
⅜" R.
1"
2"x¼" FILLET WELD (W.T.C. 230)
11"
5"x5/16" FILLET WELD + GAP (W.T.C. ~~223~~ 221 (DETAIL "A")
10"x¼" FILLET WELD (W.T.C. 221)
C32T10
5"
1"
3½"

SECTION B-B

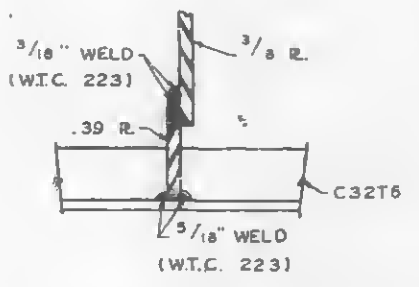


SECTION D-D

SKILLING - HELLE
CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ [illegible]
☐ [illegible]
6/3/68 . W.A.B.



SECTION F-F



SECTION E-E

REF. DRWG.

7-AB4-13.3	5-17-68
7-AB4-13.2	5-17-68
7-AB1-8	4-1-68
7-AB1-12	4-1-68

NOTE.
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATE TO BE ASTM A36

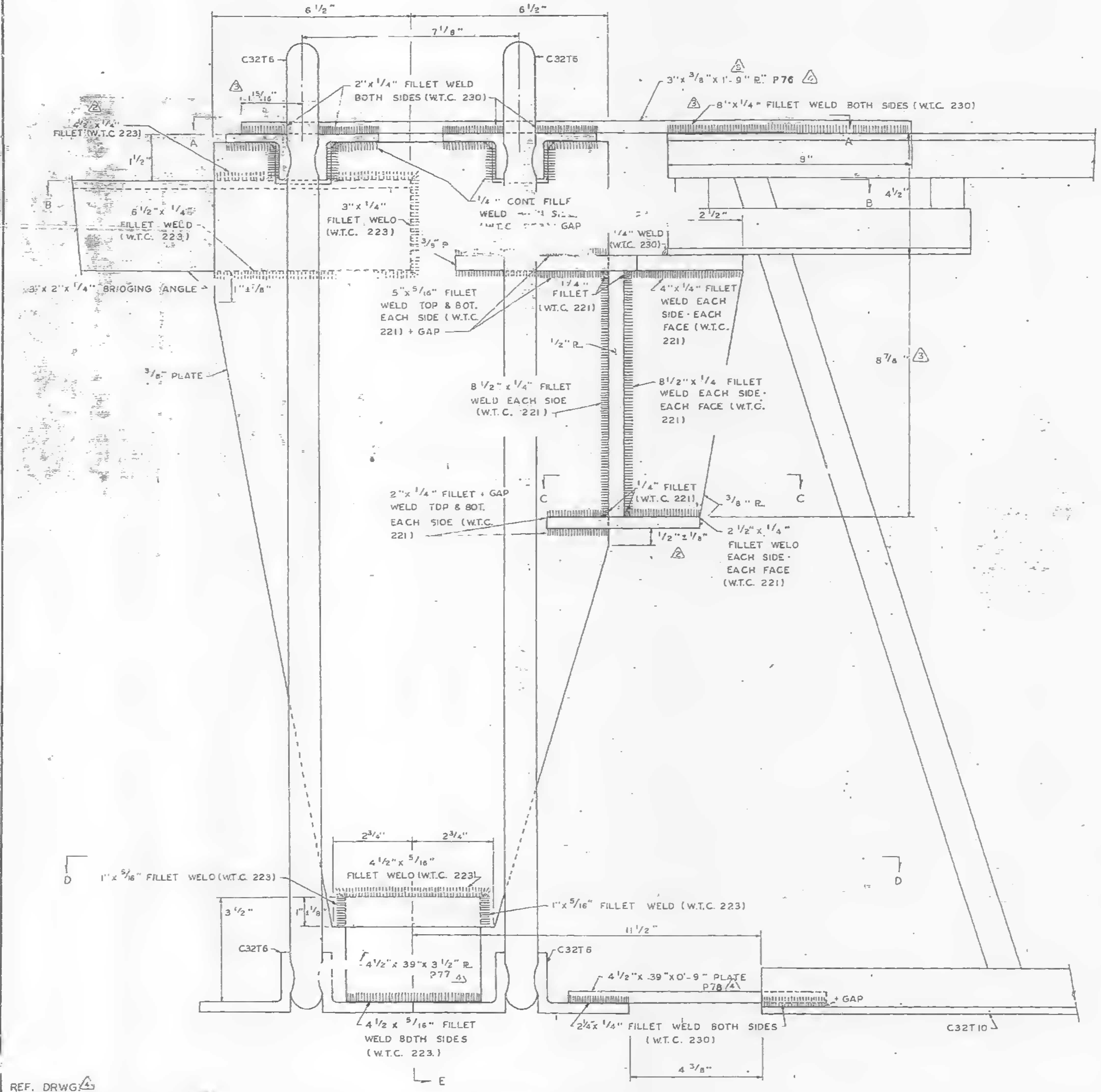
NO.	DATE	REVISION	BY
⚠	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

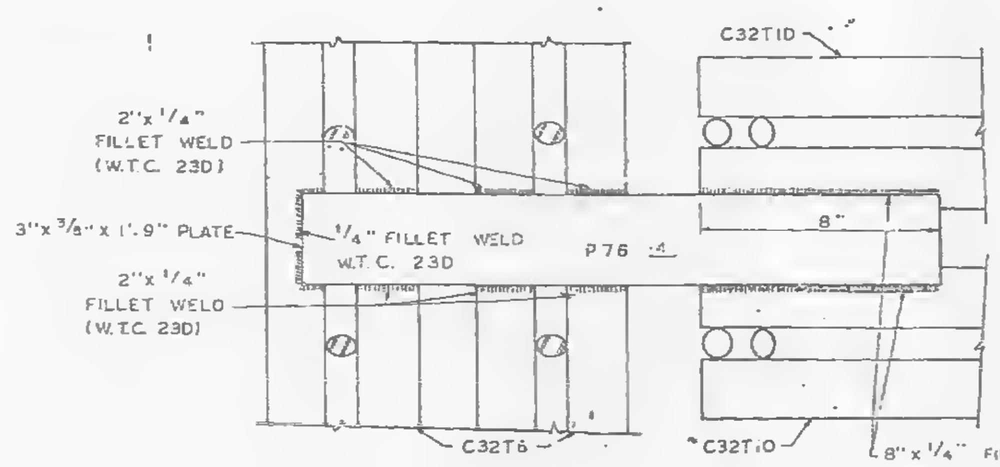
C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

FABRICATION BY: LACLEDE STEEL COMPANY

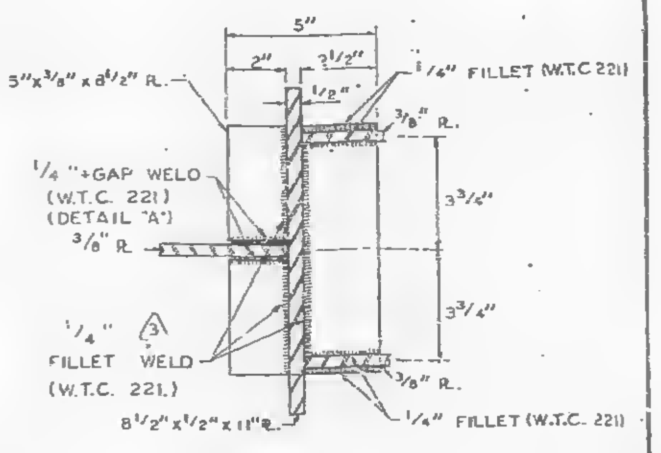
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13.1 5-6-68	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY: L.B. DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207


6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
2"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
3"x 3/8"x 1'-9" PL P76 4
8"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
1 13/16"
FILLET (W.T.C. 223)
A
A
1 1/2"
9"
4 1/2"
B
B
6 1/2"x 1/4" FILLET WELD (W.T.C. 223)
3"x 1/4" FILLET WELD (W.T.C. 223)
1/4" CONT. FILLET WELD
2 1/2"
1/4" WELD (W.T.C. 230)
3/8" P
3"x 2"x 1/4" BRIDGING ANGLE
1 1/8"
5"x 5/16" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
1/4" FILLET (W.T.C. 221)
4"x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
3/8" PLATE
1/2" R
8 7/8" 3
8 1/2"x 1/4" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2"x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
2"x 1/4" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
C
C
1/4" FILLET (W.T.C. 221)
3/8" R
1/2"±1/8"
2
2 1/2"x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
2 3/4"
2 3/4"
4 1/2"x 5/16" FILLET WELD (W.T.C. 223)
D
D
1"x 5/16" FILLET WELD (W.T.C. 223)
1"x 5/16" FILLET WELD (W.T.C. 223)
3 1/2"
1 1/8
11 1/2"
C32T6
C32T6
4 1/2"x 39"x 3 1/2" R P77 4
4 1/2"x 39"x 0'-9" PLATE P78 4
+ GAP
4 1/2 x 5/16" FILLET WELD BOTH SIDES (W.T.C. 223.)
2 1/4"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
C32T10
4 3/8"
E

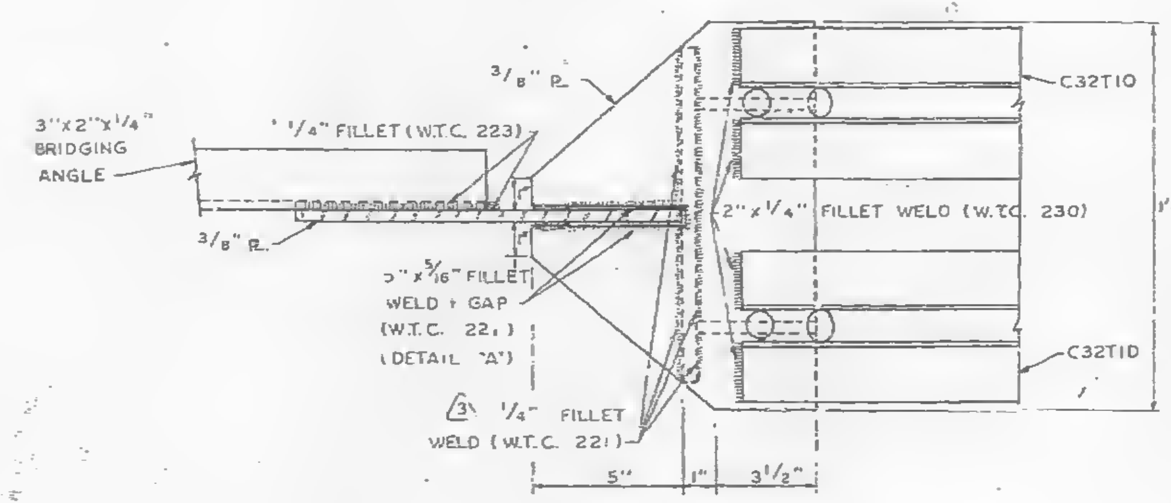
C32T10 TO 3" x 2" CONNECTION DETAIL (14-C)


C32T10
2"x 1/4" FILLET WELD (W.T.C. 230)
3"x 3/8"x 1'-9" PLATE
1/4" FILLET WELD W.T.C. 230
P76 4
8"
2"x 1/4" FILLET WELD (W.T.C. 230)
C32T6
C32T10
8"x 1/4" FILLET WELD (W.T.C. 230)

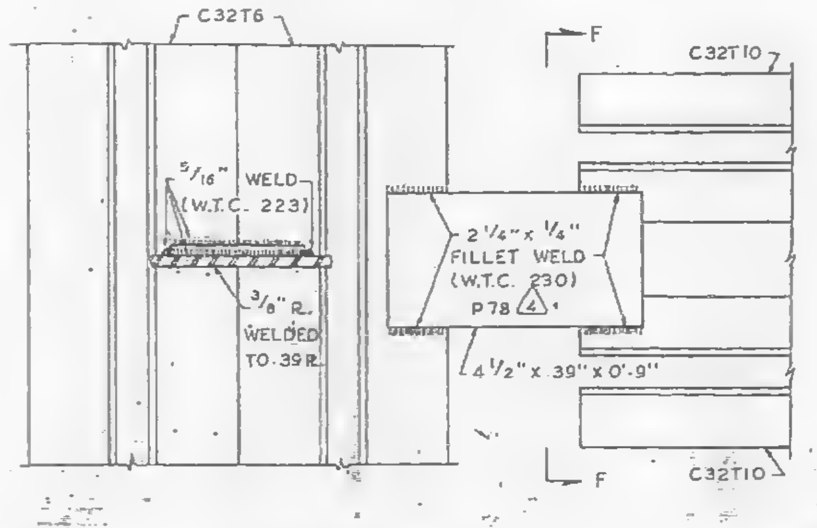
SECTION A-A



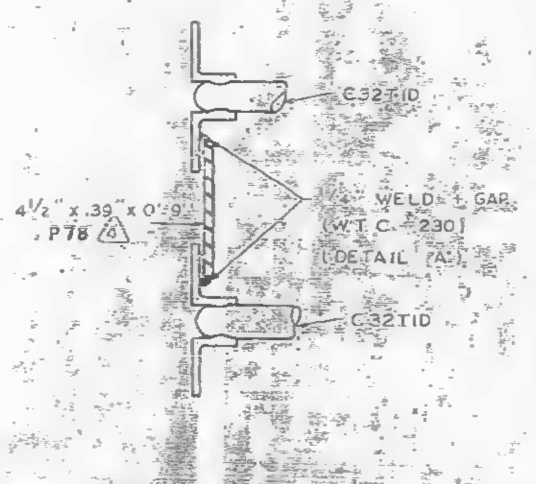
2 SECTION C-C


3/8" R
C32T10
3"x 2"x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C. 223)
2"x 1/4" FILLET WELD (W.T.C. 230)
1'-1"
3/8" R
5"x 5/16" FILLET WELD + GAP (W.T.C. 221) (DETAIL "A")
3 1/4" FILLET WELD (W.T.C. 221)
C32T10
5"
1"
3 1/2"

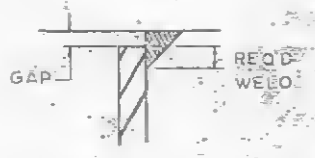
2 SECTION B-B



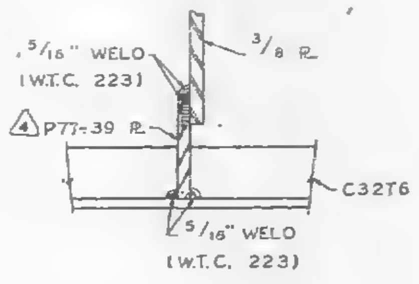
SECTION D-D



SECTION F-F



DETAIL "A"



SECTION E-E

REF. DRWG 4

7-A84-11.3	7-22-68
7-A84-13.2	10-15-68
7-A81-8	7-22-68
7-A81-12	7-22-68

NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A36. 2

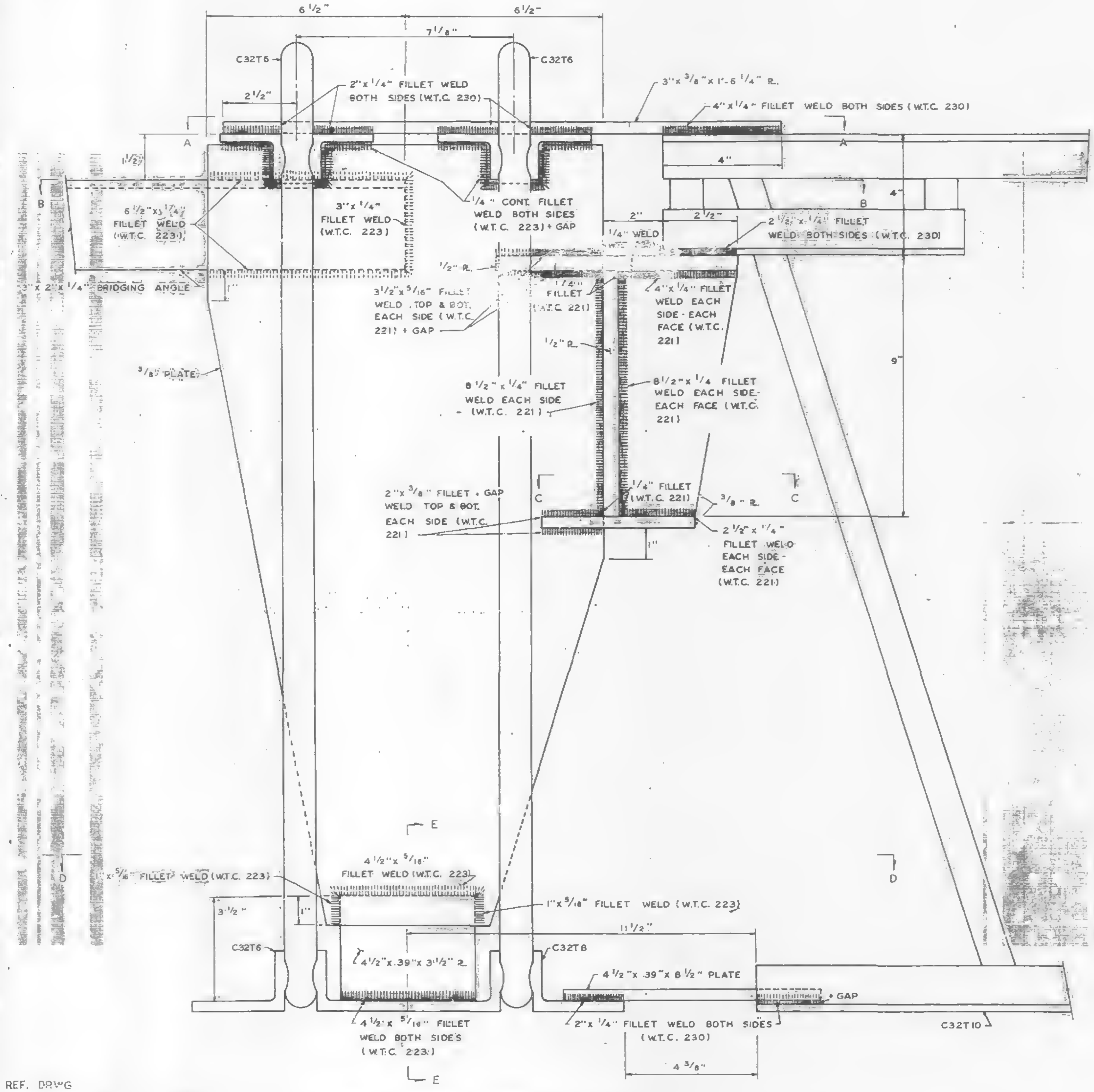
NO.	DATE	REVISION	BY
4	4-2-69	AS NOTED	
3	6-20-68	DIMENSION & WELDS	L.W.H.
2	6-6-68	DIMENSIONS ADDED, NOTES	G.D.C.
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

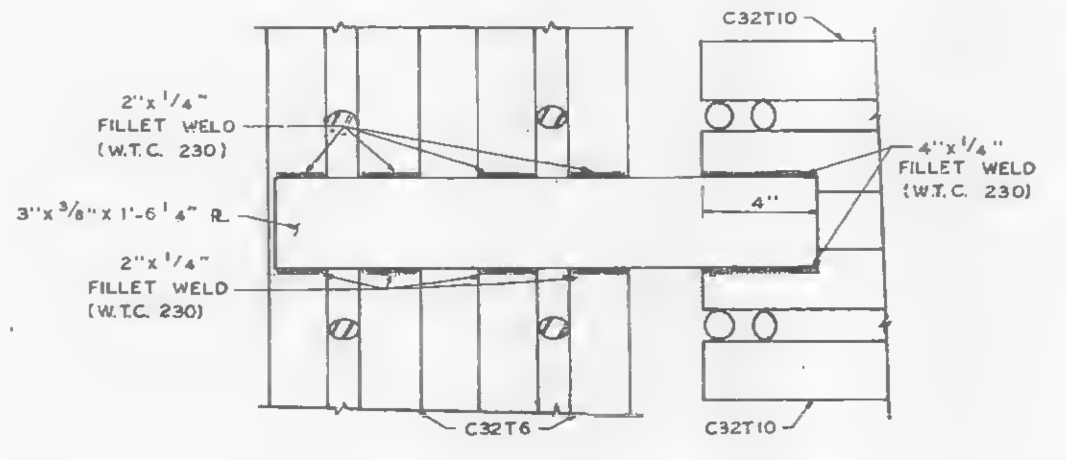
C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

FABRICATION BY: LACLEDE STEEL COMPANY

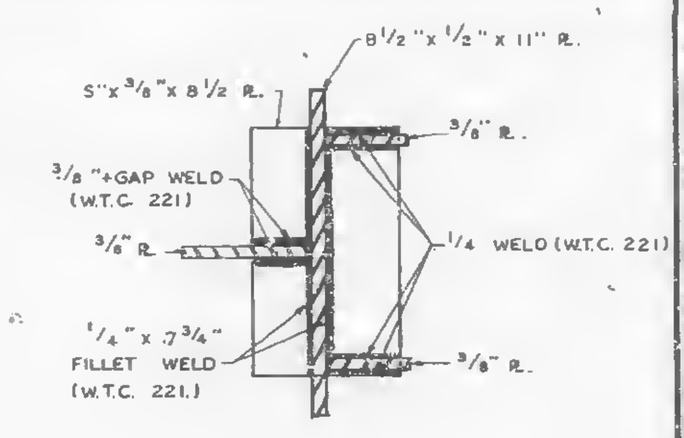
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13.1 5-6-68 PLATE	
APPROVED FOR FABRICATION BY White FOR P.O.N.Y.A.	DATE 4/15/69	DRAWN BY: lwh DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207


6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
2 1/2"
2"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
3"x 3/8"x 1'-6 1/4" PL.
4"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
A
A
1 1/2"
B
B
6 1/2"x 1/4" FILLET WELD (W.T.C. 223)
3"x 1/4" FILLET WELD (W.T.C. 223)
1/4" CONT. FILLET WELD BOTH SIDES (W.T.C. 223) + GAP
4"
4"
2"
2 1/2"
2 1/2"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
1/4" WELD
1/2" PL.
3"x 2"x 1/4" BRIDGING ANGLE
3 1/2"x 5/16" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
1/4" FILLET (W.T.C. 221)
4"x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
1/2" PL.
3/8" PLATE
9"
8 1/2"x 1/4" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2"x 1/4 FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
C
C
2"x 3/8" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" PL.
1"
2 1/2"x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
E
D
D
1"x 5/16" FILLET WELD (W.T.C. 223)
4 1/2"x 5/16" FILLET WELD (W.T.C. 223)
1"x 5/16" FILLET WELD (W.T.C. 223)
3 1/2"
1"
11 1/2"
C32T6
C32T8
4 1/2"x .39"x 3 1/2" PL.
4 1/2"x .39"x 8 1/2" PLATE
+ GAP
4 1/2"x 5/16" FILLET WELD BOTH SIDES (W.T.C. 223)
2"x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
C32T10
4 3/8"
E

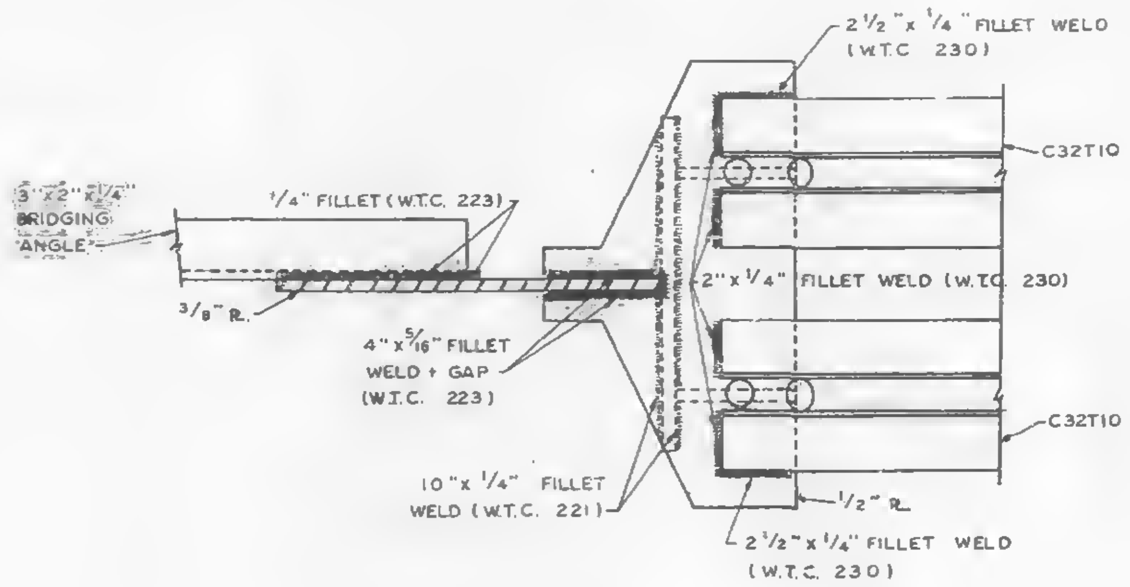
C32T10 TO 3" x 2" CONNECTION DETAIL (14-C)


C32T10
2"x 1/4" FILLET WELD (W.T.C. 230)
3"x 3/8"x 1'-6 1/4" PL.
2"x 1/4" FILLET WELD (W.T.C. 230)
4"x 1/4" FILLET WELD (W.T.C. 230)
4"
C32T6
C32T10

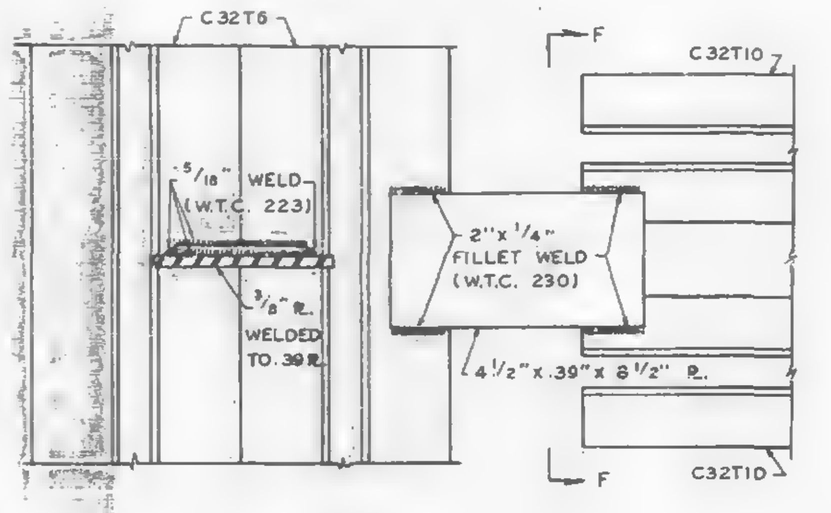
SECTION A-A



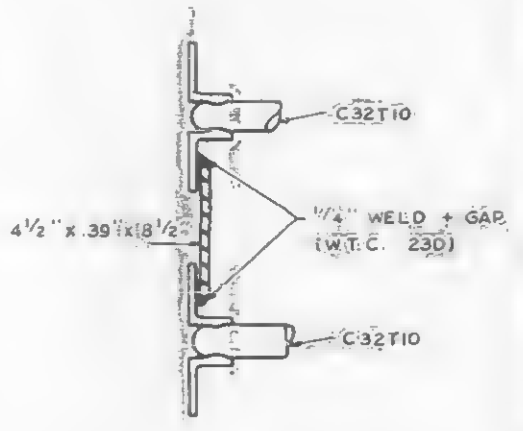
SECTION C-C


2 1/2"x 1/4" FILLET WELD (W.T.C. 230)
C32T10
3"x 2"x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C. 223)
2"x 1/4" FILLET WELD (W.T.C. 230)
3/8" PL.
4"x 5/16" FILLET WELD + GAP (W.T.C. 223)
C32T10
10"x 1/4" FILLET WELD (W.T.C. 221)
1/2" PL.
2 1/2"x 1/4" FILLET WELD (W.T.C. 230)

SECTION B-B



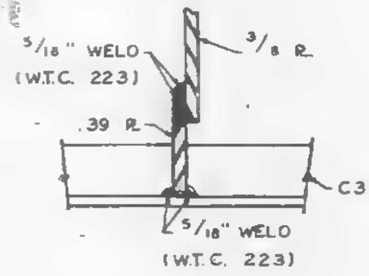
SECTION D-D



SECTION F-F

UOID

5/17/68



SECTION E-E

REF. DRWG

7-A84-11.3	5-6-68
7-A84-13.2	5-6-68
7-A81-8	4-1-68
7-A81-12	4-1-68

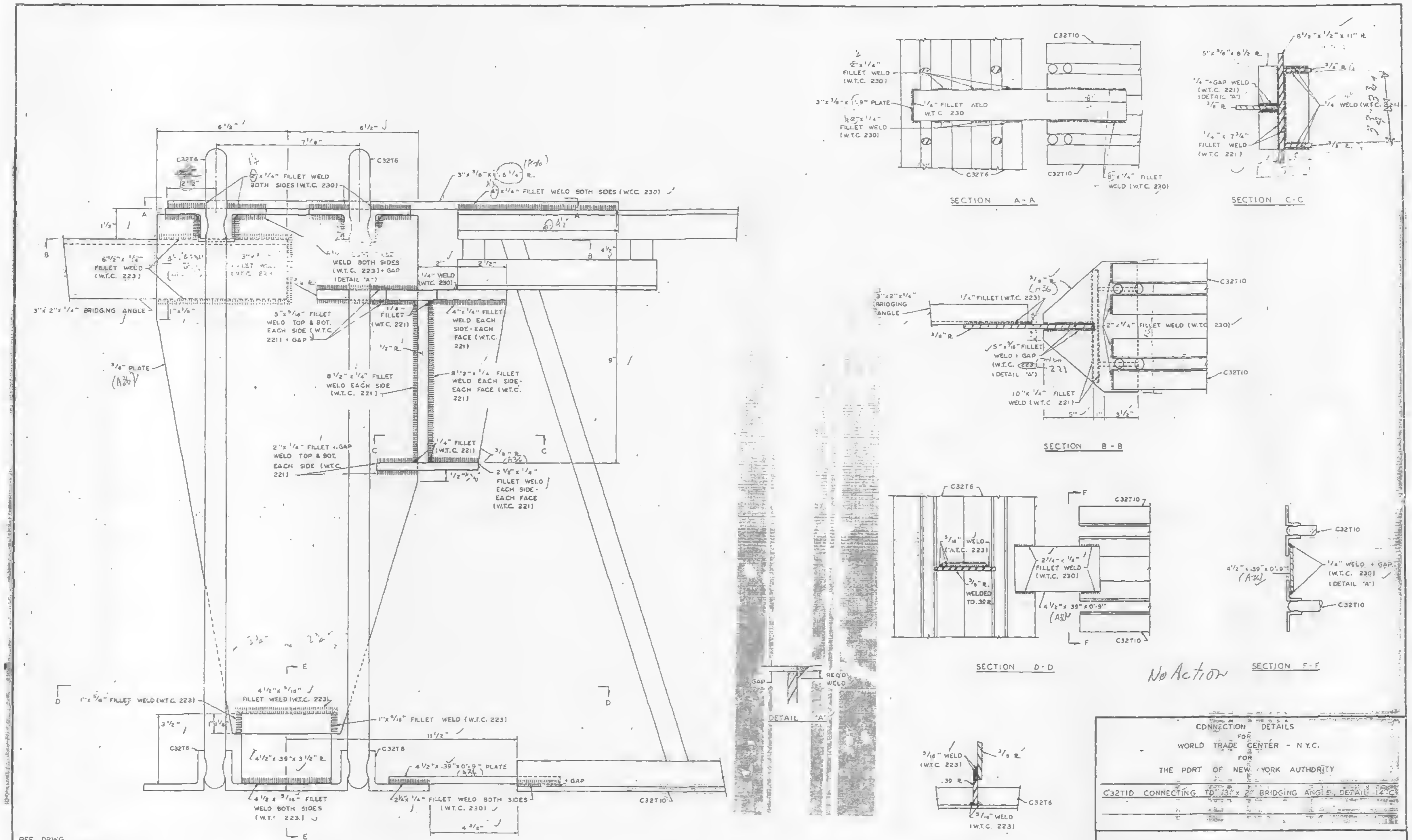
NOTE
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13.1 5-6-68	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY:	
		DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207


6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
2" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
3" x 3/8" x 1'-6 1/4" R.
(A36)
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
1 1/2"
A
A
B
B
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
WELD BOTH SIDES (W.T.C. 223) + GAP (DETAIL "A")
1/4" WELD (W.T.C. 230)
2"
2 1/2"
4 1/2"
3" x 2" x 1/4" BRIDGING ANGLE
5" x 5/16" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
1/4" FILLET (W.T.C. 221)
4" x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
1/2" R.
3/8" PLATE
(A36)
8 1/2" x 1/4" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2" x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
9"
2" x 1/4" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" R.
(A36)
2 1/2" x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
C
C
D
D
E
E
1" x 5/16" FILLET WELD (W.T.C. 223)
4 1/2" x 5/16" FILLET WELD (W.T.C. 223)
1" x 5/16" FILLET WELD (W.T.C. 223)
3 1/2"
C32T6
4 1/2" x .39" x 3 1/2" R.
11 1/2"
C32T6
4 1/2" x .39" x 0'-9" PLATE
(A36)
+ GAP
4 1/2 x 5/16" FILLET WELD BOTH SIDES (W.T.C. 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 3/8"
C32T10
GAP
REQ'D WELD
DETAIL "A"
2" x 1/4" FILLET WELD (W.T.C. 230)
3" x 3/8" x 1'-9" PLATE
1/4" FILLET WELD W.T.C. 230
2" x 1/4" FILLET WELD (W.T.C. 230)
C32T10
C32T6
C32T10
8" x 1/4" FILLET WELD (W.T.C. 230)
SECTION A-A
8 1/2" x 1/2" x 11" R.
5" x 3/8" x 8 1/2 R.
3/4" R.
1/4" + GAP WELD (W.T.C. 221) (DETAIL "A")
3/8" R.
1/4" WELD (W.T.C. 221)
1/4" x 7 3/4" FILLET WELD (W.T.C. 221)
3/8" R.
SECTION C-C
3/8" R.
(A36)
3" x 2" x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C. 223)
3/8" R.
C32T10
2" x 1/4" FILLET WELD (W.T.C. 230)
5" x 5/16" FILLET WELD + GAP (W.T.C. 223) (DETAIL "A")
221
10" x 1/4" FILLET WELD (W.T.C. 221)
C32T10
5"
1"
3 1/2"
SECTION B-B
C32T6
5/16" WELD (W.T.C. 223)
3/8" R. WELDED TO .39 R.
F
C32T10
2 1/4" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2" x 39" x 0'-9"
(A36)
F
C32T10
SECTION D-D
C32T10
4 1/2" x .39" x 0'-9"
(A36)
1/4" WELD + GAP (W.T.C. 230) (DETAIL "A")
C32T10
SECTION F-F
5/16" WELD (W.T.C. 223)
3/8" R.
.39 R.
C32T6
5/16" WELD (W.T.C. 223)
SECTION E-E

No Action

C32T10 TO 3" x 2" CONNECTION DETAIL (4-C)

REF. DRWG.
7-A84-11.3 5-17-68
7-A84-13.2 5-17-68
7-A8 . . . 1-1-68
7-A8 . 12 4-1-68

NOTE
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

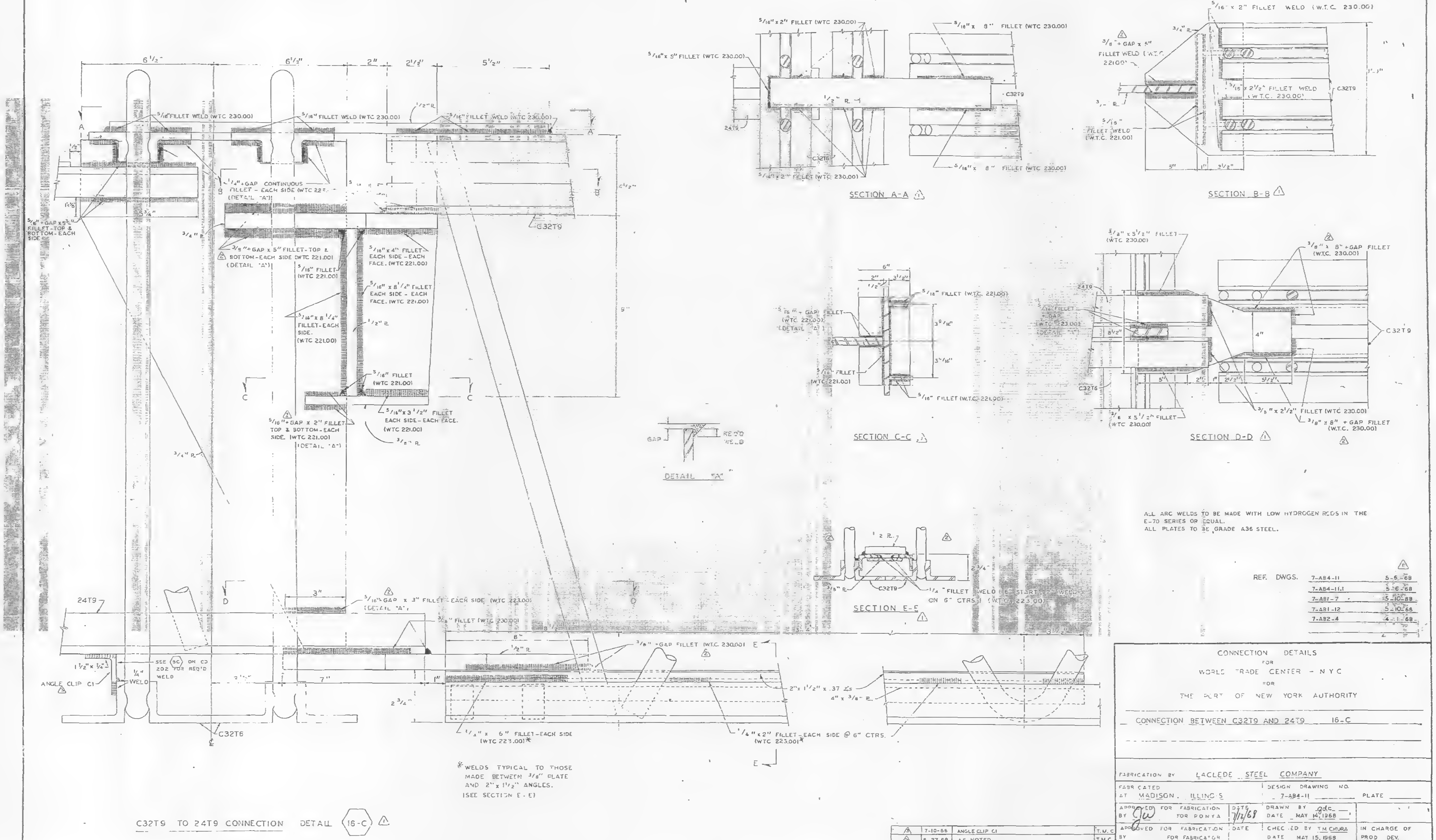
NO	DATE	REVISION	BY
△	5-20-68	WELD CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13.1 5-6-68	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207


6 1/2"
6 1/2"
2"
2 1/2"
5 1/2"
A
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
1/2" R.
1/2"
1/4" + GAP CONTINUOUS FILLET - EACH SIDE (WTC 223...) (DETAIL "A")
B
1 5/8
5 3/4"
5/16" + GAP x 5 1/2" FILLET - TOP & BOTTOM - EACH SIDE
3/4" R.
3/8" + GAP x 5" FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00) (DETAIL "A")
C32T9
5/16" x 4" FILLET - EACH SIDE - EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET - EACH SIDE. (WTC 221.00)
1/2" R.
5/16" FILLET (WTC 221.00)
C
C
5/16" x 3 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
3/8" R.
5/16" + GAP x 2" FILLET TOP & BOTTOM - EACH SIDE. (WTC 221.00) (DETAIL "A")
3/4" R.
2 1/2"
GAP
REQ'D WELD
DETAIL "A"
24T9
D
3"
5/16" + GAP x 3" FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
3/8" FILLET (WTC 230.00)
D
8"
1/2" R.
3/8" + GAP FILLET (W.T.C. 230.00)
E
1 1/2" x 1/4"
ANGLE CLIP C1
SEE 8C ON CD 202 FOR REQ'D WELD
1/4" WELD
7"
1"
2 3/4"
2" x 1 1/2" x .37 ∠s
4" x 3/8" R.
C32T6
℄
1/4" x 6" FILLET - EACH SIDE (WTC 223.00)*
1/4" x 2" FILLET - EACH SIDE @ 6" CTRS. (WTC 223.00)*
E
5/16" x 2" FILLET (WTC 230.00)
5/16" x 8" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00)
1/2" R.
C32T9
24T9
C32T6
5/16" x 8" FILLET (WTC 230.00)
5/16" x 2" FILLET (WTC 230.00)
SECTION A-A
5/16" x 2" FILLET WELD (W.T.C. 230.00)
3/4" R.
3/8" + GAP x 5" FILLET WELD (W.T.C. 221.00)
5/16" x 2 1/2" FILLET WELD (W.T.C. 230.00)
C32T9
3/4" R.
5/16" FILLET WELD (W.T.C. 221.00)
5"
1"
2 1/2"
SECTION B-B
6"
2"
3 1/2"
1/2"
5/16" FILLET (W.T.C. 221.00)
5/16" + GAP FILLET (WTC 221.00) (DETAIL "A")
3 9/16"
3 7/16"
5/16" FILLET (WTC 221.00)
5/16" FILLET (W.T.C. 221.00)
SECTION C-C
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8" x 8" + GAP FILLET (W.T.C. 230.00)
24T9
5/16" FILLET + GAP (W.T.C. 223.00) (DETAIL "A")
8 1/2"
4"
C32T9
C32T6
5"
2"
1"
2 1/2"
5 1/2"
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8" x 2 1/2" FILLET (WTC 230.00)
3/8" x 8" + GAP FILLET (W.T.C. 230.00)
SECTION D-D
1/2" R.
3/8" R.
C32T9
1/4" FILLET WELD (6" START @ 6" CTRS.) (WTC 223.00)
2 3/4"
SECTION E-E

*WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E-E)

C32T9 TO 24T9 CONNECTION DETAIL 16-C

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11	5-6-68
7-AB4-11.1	5-6-68
7-AB1-7	5-10-68
7-AB1-12	5-10-68
7-AB2-4	4-1-68

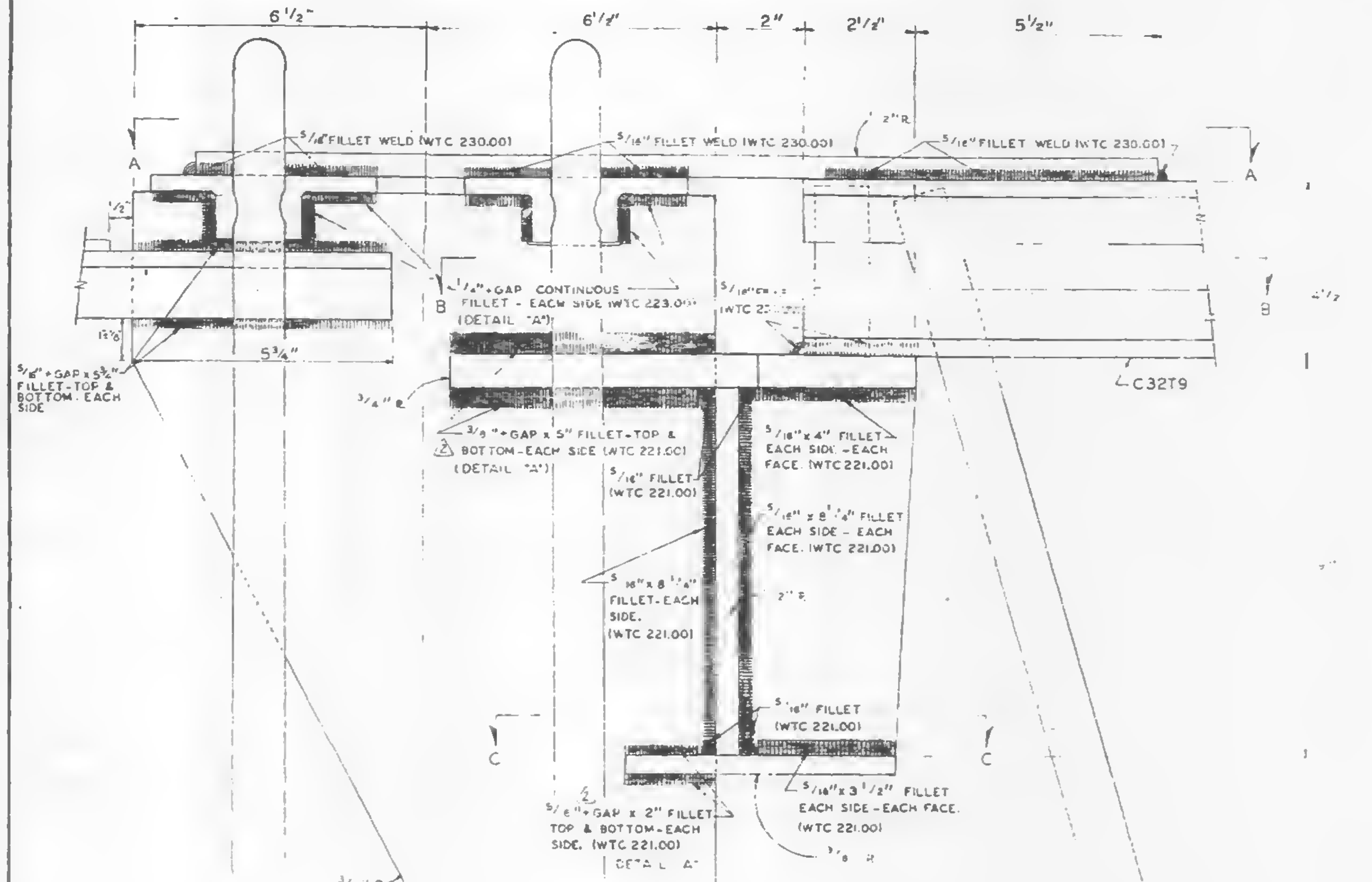
NO	DATE	REVISION	BY
3	7-10-68	ANGLE CLIP C1	T.M.C.
2	6-27-68	AS NOTED	T.M.C.
1	6-20-68	GENERAL	L.W.H.

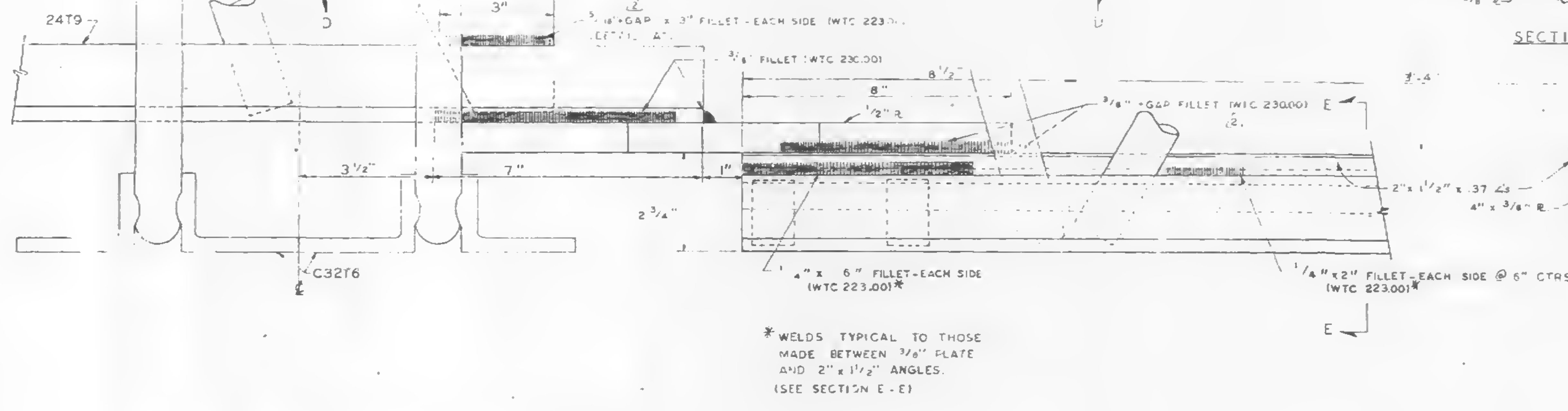
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB4-11
PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA
DATE 7/12/68
DRAWN BY gdc
DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY T.M. CHURA
DATE MAY 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. CD 208

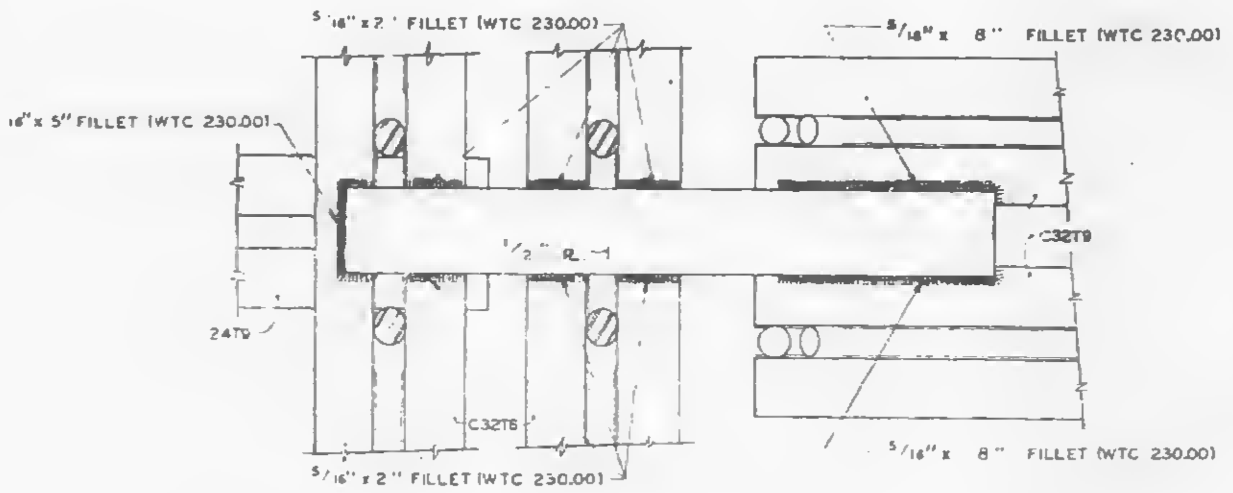
7-11


6 1/2"
6 1/2"
2"
2 1/2"
5 1/2"
A
A
2" R
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
1/2"
1/4" + GAP CONTINUOUS FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
5/16" FILLET (WTC 2[illegible])
B
B
1 3/8"
5 3/4"
5/16" + GAP x 5 3/4" FILLET-TOP & BOTTOM. EACH SIDE
3/4" R
C32T9
3/8" + GAP x 5" FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" FILLET (WTC 221.00)
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET-EACH SIDE. (WTC 221.00)
2" R
5/16" FILLET (WTC 221.00)
C
C
5/8" + GAP x 2" FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.00) DETAIL "A"
5/16" x 3 1/2" FILLET EACH SIDE-EACH FACE. (WTC 221.00)
3/8" R
3/4" R

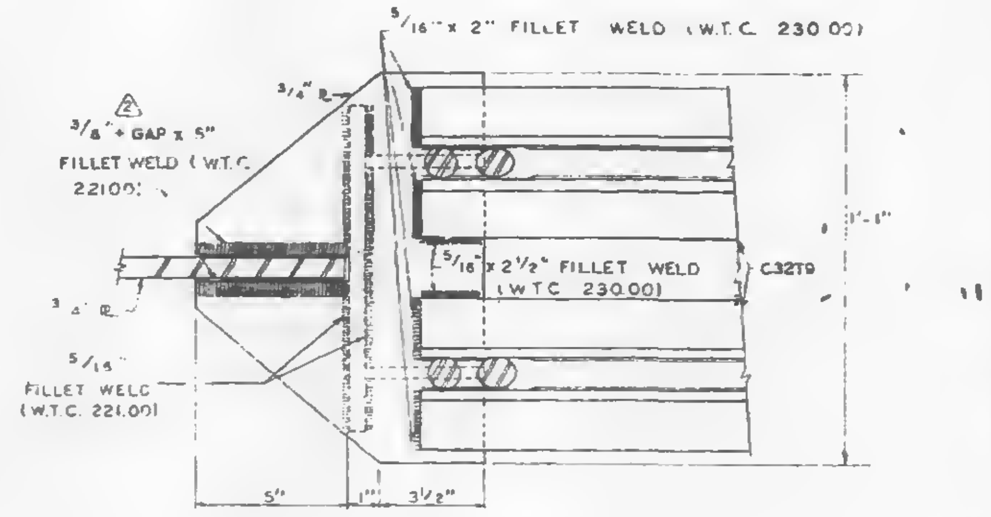

24T9
D
D
3"
5/16" + GAP x 3" FILLET - EACH SIDE (WTC 223.00) DETAIL "A"
3/8" FILLET (WTC 230.00)
8 1/2"
8"
1/2" R
3/8" + GAP FILLET (WTC 230.00)
E
E
3 1/2"
7"
1"
2 3/4"
2" x 1 1/2" x .37 ∠s
4" x 3/8" R
C32T6
1/4" x 6" FILLET-EACH SIDE (WTC 223.00)*
1/4" x 2" FILLET-EACH SIDE @ 6" CTRS. (WTC 223.00)*

* WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E - E)

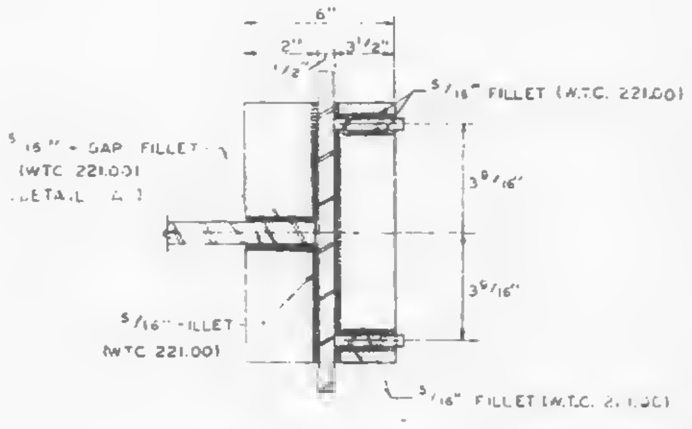
C32T9 TO 24T9 CONNECTION DETAIL 16-C ⚠1


5/16" x 2" FILLET (WTC 230.00)
5/16" x 8" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00)
1/2" R
C32T9
24T9
C32T6
5/16" x 2" FILLET (WTC 230.00)
5/16" x 8" FILLET (WTC 230.00)

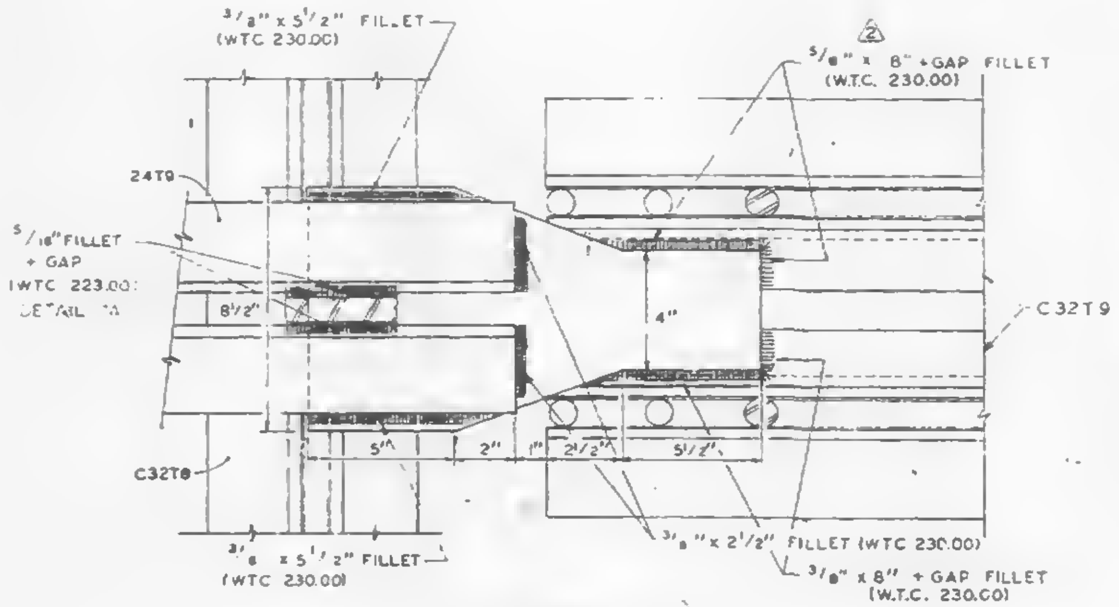
SECTION A-A


5/16" x 2" FILLET WELD (W.T.C. 230.00)
3/4" R
3/8" + GAP x 5" FILLET WELD (W.T.C. 221.00)
5/16" x 2 1/2" FILLET WELD (W.T.C. 230.00)
C32T9
3/4" R
5/16" FILLET WELD (W.T.C. 221.00)
5"
1"
3 1/2"

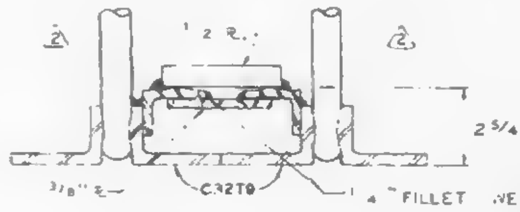
SECTION B-B ⚠1


6"
2"
3 1/2"
1/2"
5/16" FILLET (W.T.C. 221.00)
5/16" + GAP FILLET (WTC 221.00) DETAIL "A"
3 9/16"
3 9/16"
5/16" FILLET (WTC 221.00)
5/16" FILLET (W.T.C. 221.00)

SECTION C-C

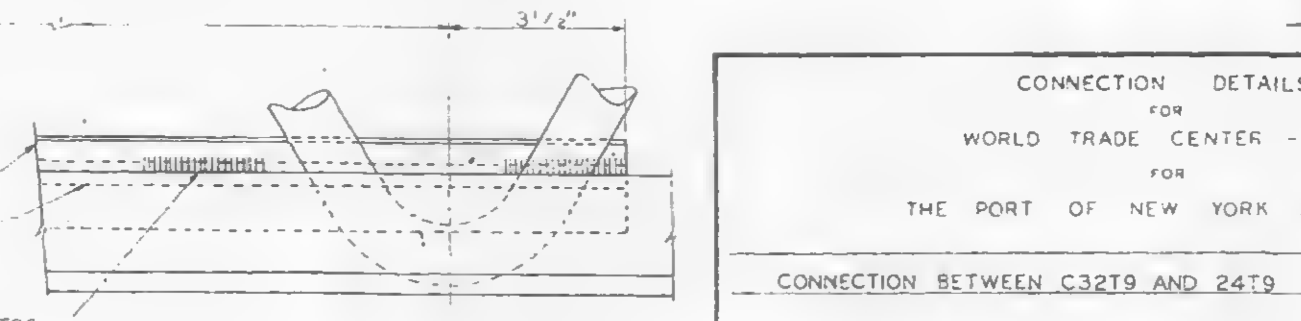

3/8" x 5 1/2" FILLET (WTC 230.00)
5/8" x 8" + GAP FILLET (W.T.C. 230.00)
24T9
5/16" FILLET + GAP (WTC 223.00) DETAIL "A"
8 1/2"
4"
C32T9
C32T8
5"
2"
1"
2 1/2"
5 1/2"
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8" x 2 1/2" FILLET (WTC 230.00)
3/8" x 8" + GAP FILLET (W.T.C. 230.00)

SECTION D-D ⚠1



1/4" FILLET WELD (6" START, 2" WELD ON 6" CTRS.) (WTC 223.00)

SECTION E-E ⚠1



ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

⚠1

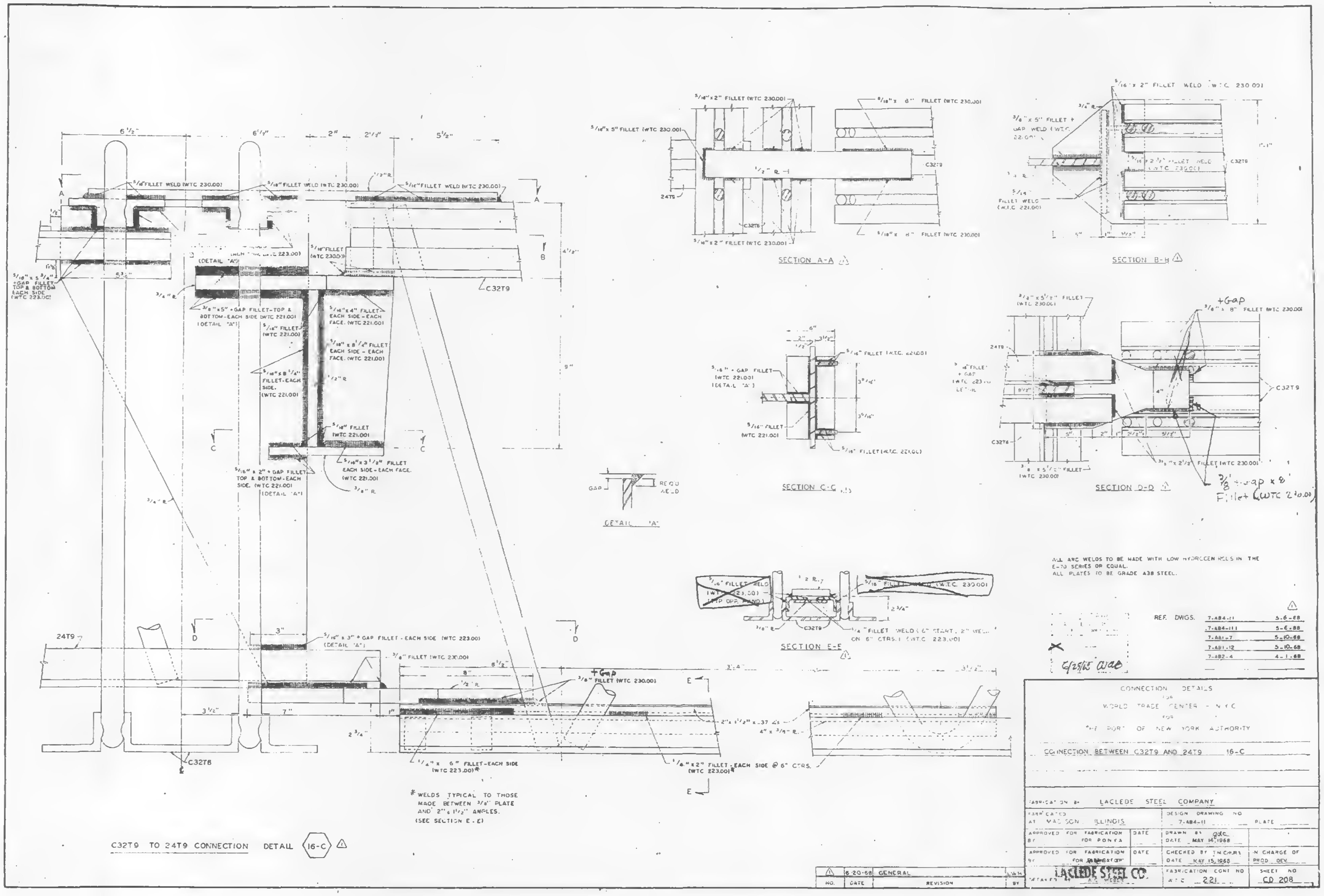
REF. DWGS.		
	7-AB4-11	5-6-68
	7-AB4-11.1	5-6-68
	7-AB1-7	5-10-68
	7-AB1-12	5-10-68
	7-AB2-4	4-1-68

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB4-11 PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA DATE 7/5/68
DRAWN BY gdc DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA DATE MAY 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO W-T-C 221
SHEET NO CD 208

NO	DATE	REVISION	BY
⚠2	6-27-68	AS NOTED	T.M.C.
⚠1	6-20-68	GENERAL	L.W.H.


6 1/2"
6 1/2"
2"
2 1/2"
5 1/2"
A
A
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
1/2" R.
1/2"
1 7/8
5 3/4"
5/16" x 5 3/4" +GAP FILLET-TOP & BOTTOM EACH SIDE (WTC 223.00)
(DETAIL "A")
5/16" FILLET (WTC 230.00)
B
4 1/2"
C32T9
3/4" R.
3/8" x 5" +GAP FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.001 (DETAIL "A")
5/16" x 4" FILLET-EACH SIDE-EACH FACE. (WTC 221.001
5/16" FILLET (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.001
5/16" x 8 1/4" FILLET-EACH SIDE. (WTC 221.001
1/2" R
9"
5/16" FILLET (WTC 221.001
C
C
5/16" x 2" + GAP FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.001 (DETAIL "A")
5/16" x 3 1/2" FILLET EACH SIDE-EACH FACE. (WTC 221.001
3/8" R.
3/4" R.
GAP
REQ'D WELD
DETAIL "A"
24T9
D
D
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
3/8" FILLET (WTC 230.00)
6 1/2"
8"
1/2" R.
+Gap
3/8" FILLET (WTC 230.00)
3 1/2"
7"
1"
2 3/4"
C32T8
E
E
3'-4"
3 1/2"
2" x 1 1/2" x .37 ∠s
4" x 3/8" R.
1/4" x 6" FILLET-EACH SIDE (WTC 223.00)*
1/8" x 2" FILLET-EACH SIDE @ 6" CTRS. (WTC 223.00)*
5/16" x 2" FILLET (WTC 230.001
5/16" x 5" FILLET (WTC 230.001
5/16" x 8" FILLET (WTC 230.001
1/2" R.
C32T9
24T9
C32T8
5/16" x 8" FILLET (WTC 230.001
5/16" x 2" FILLET (WTC 230.001
SECTION A-A
5/16" x 2" FILLET WELD (W.T.C. 230.00)
3/4" R.
3/8" x 5" FILLET + GAP WELD (W.T.C. 221.00)
5/16" x 2 1/2" FILLET WELD (W.T.C. 230.00)
C32T9
1'-1"
5/16" FILLET WELD (W.T.C. 221.00)
5"
1"
3 1/2"
SECTION B-B
6"
2"
3 1/2"
1/2"
5/16" FILLET (W.T.C. 221.001
5/16" + GAP FILLET (WTC 221.001 (DETAIL "A")
3 9/16"
3 9/16"
5/16" FILLET (WTC 221.001
5/16" FILLET (W.T.C. 221.00)
SECTION C-C
3/8" x 5 1/2" FILLET (WTC 230.00)
+Gap
3/8" x 8" FILLET (WTC 230.001
24T9
5/16" FILLET + GAP (WTC 223.00) DETAIL
9 1/2"
4"
C32T9
C32T8
5"
2"
1"
2 1/2"
5 1/2"
3/8" x 2 1/2" FILLET (WTC 230.001
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8 +Gap x 8' Fillet (WTC 230.00)
SECTION D-D
~~5/16" FILLET WELD (WTC 223.00) (TYP OPP. HAND)~~
1/2 R.
~~5/16" FILLET WELD (W.T.C. 230.001~~
2 3/4"
3/8" R.
C32T9
1/4" FILLET WELD (6" START, 2" WELD ON 6" CTRS.) (W.T.C. 223.00)
SECTION E-E

*WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E-E)

C32T9 TO 24T9 CONNECTION DETAIL 16-C

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A38 STEEL.

6/25/65 WAB

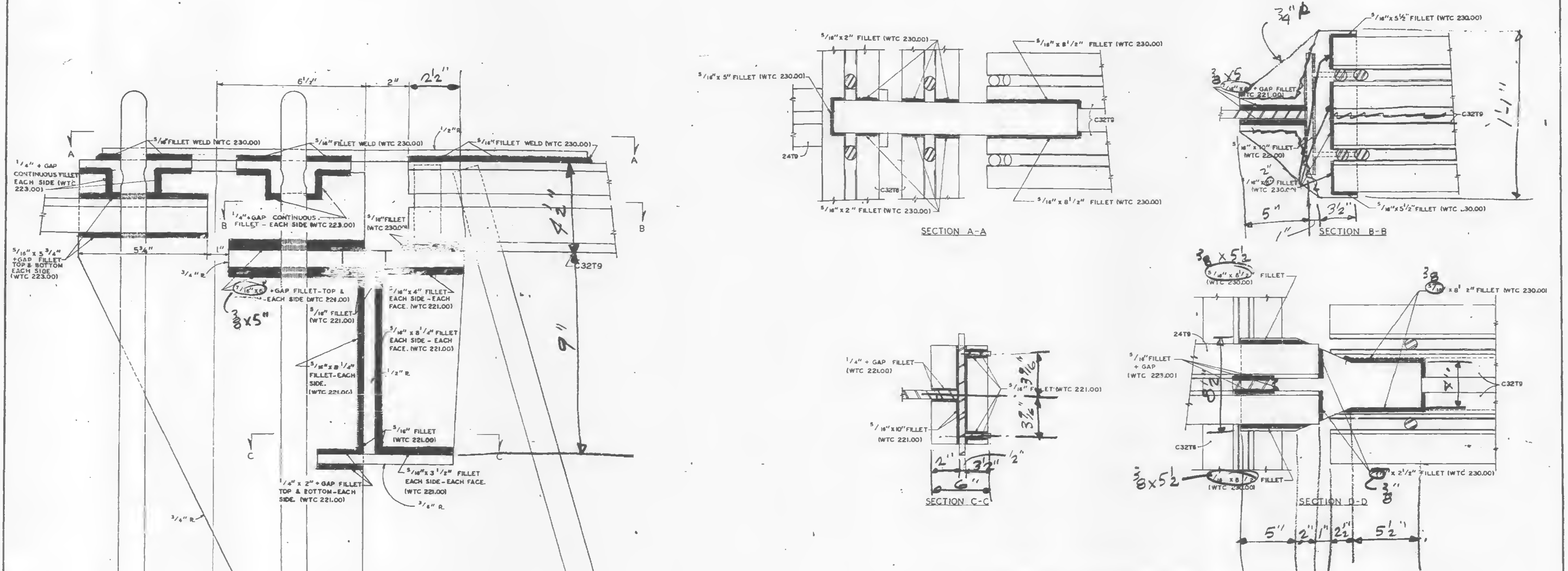
REF. DWGS.		
	7-484-11	5-6-68
	7-484-111	5-6-68
	7-481-7	5-10-68
	7-481-12	5-10-68
	7-482-4	4-1-68

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

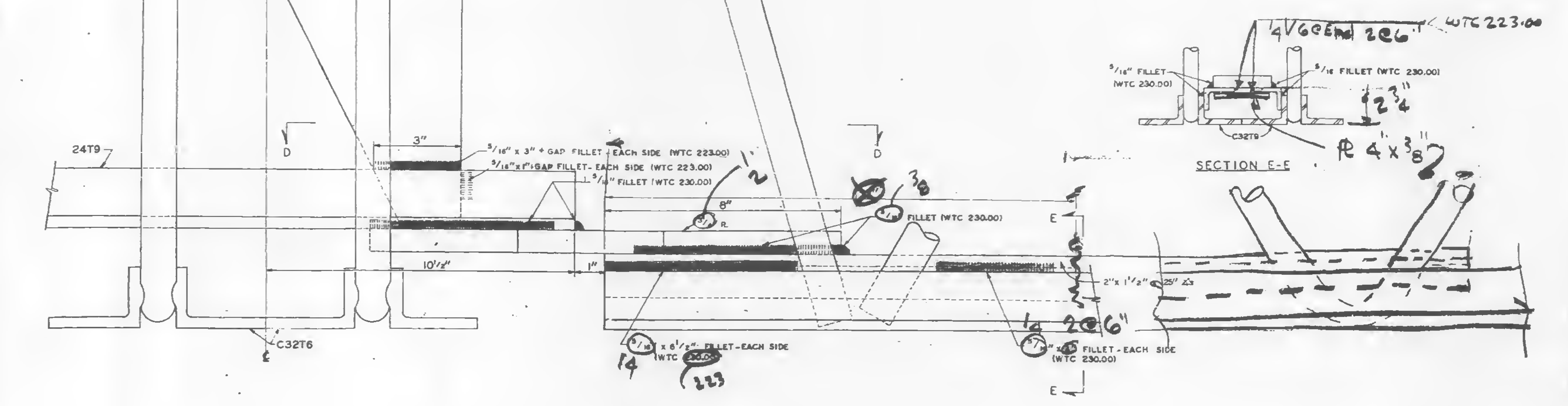
CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY		
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO 7-484-11 PLATE	
APPROVED FOR FABRICATION BY FOR PONYA — DATE	DRAWN BY gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE	CHECKED BY T.M.CHURS DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER — LACLEDE STEEL CO.	FABRICATION CONT NO W.T.C. 221	SHEET NO CD 208

NO.	DATE	REVISION	BY
1	6-20-68	GENERAL	LWH


6 1/2"
2"
2 1/2"
1/2" R.
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
A
A
1/4" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00)
1/4" + GAP CONTINUOUS FILLET - EACH SIDE (WTC 223.00)
5/16" FILLET (WTC 230.00)
B
B
4 1/2"
5/16" x 5 3/4" +GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
5 3/4"
1"
3/4" R.
C32T9
7/16" x 5" +GAP FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00)
3/8 x 5"
5/16" x 4" FILLET - EACH SIDE - EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET - EACH SIDE. (WTC 221.00)
1/2" R.
9"
5/16" FILLET (WTC 221.00)
C
C
1/4" x 2" + GAP FILLET TOP & BOTTOM - EACH SIDE. (WTC 221.00)
5/16" x 3 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
3/8" R.
3/4" R.
5/16" x 2" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00)
5/16" x 8 1/2" FILLET (WTC 230.00)
24T9
C32T9
C32T8
5/16" x 2" FILLET (WTC 230.00)
5/16" x 8 1/2" FILLET (WTC 230.00)
SECTION A-A
3/4" ℞
5/16" x 5 1/2" FILLET (WTC 230.00)
3/8 x 5
7/16" x 5" + GAP FILLET (WTC 221.00)
C32T9
1'-1"
5/16" x 10" FILLET (WTC 221.00)
2"
7/16" x 5" FILLET (WTC 230.00)
5/16" x 5 1/2" FILLET (WTC 230.00)
5"
3 1/2"
1"
SECTION B-B
3/8 x 5 1/2
5/16" x 8 1/2" (WTC 230.00) FILLET
3/8
5/16" x 8 1/2" FILLET (WTC 230.00)
24T9
5/16" FILLET + GAP (WTC 223.00)
8 1/2"
4"
C32T9
C32T8
3/8 x 5 1/2
5/16" x 8 1/2" (WTC 230.00) FILLET
5/16" x 2 1/2" FILLET (WTC 230.00)
3/8"
SECTION D-D
5"
2"
1"
2 1/2"
5 1/2"
1/4" + GAP FILLET (WTC 221.00)
5/16" FILLET (WTC 221.00)
3 9/16"
3 1/2"
5/16" x 10" FILLET (WTC 221.00)
2"
3 1/2"
1/2"
6"
SECTION C-C

ALL ARC WELDS TO BE MADE WITH LOW HYDOGEN ROOS IN THE E-70 SERIES OR EQUAL.


1/4 V6@End 2@6" < WTC 223.00
5/16" FILLET (WTC 230.00)
5/16 FILLET (WTC 230.00)
2 3/4"
C32T9
SECTION E-E
℞ 4" x 3/8"
24T9
D
D
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00)
5/16" x 1" + GAP FILLET - EACH SIDE (WTC 223.00)
5/16" FILLET (WTC 230.00)
1/2
8"
3/8
5/16" R.
5/16" FILLET (WTC 230.00)
E
10 1/2"
1"
2" x 1 1/2" @ 25" ⊿
C32T6
5/16" x 6 1/2" FILLET - EACH SIDE (WTC 230.00)
1/4
223
1/4 2@6"
5/16" x 2" FILLET - EACH SIDE (WTC 230.00)
E

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
6/3/68 . WGB

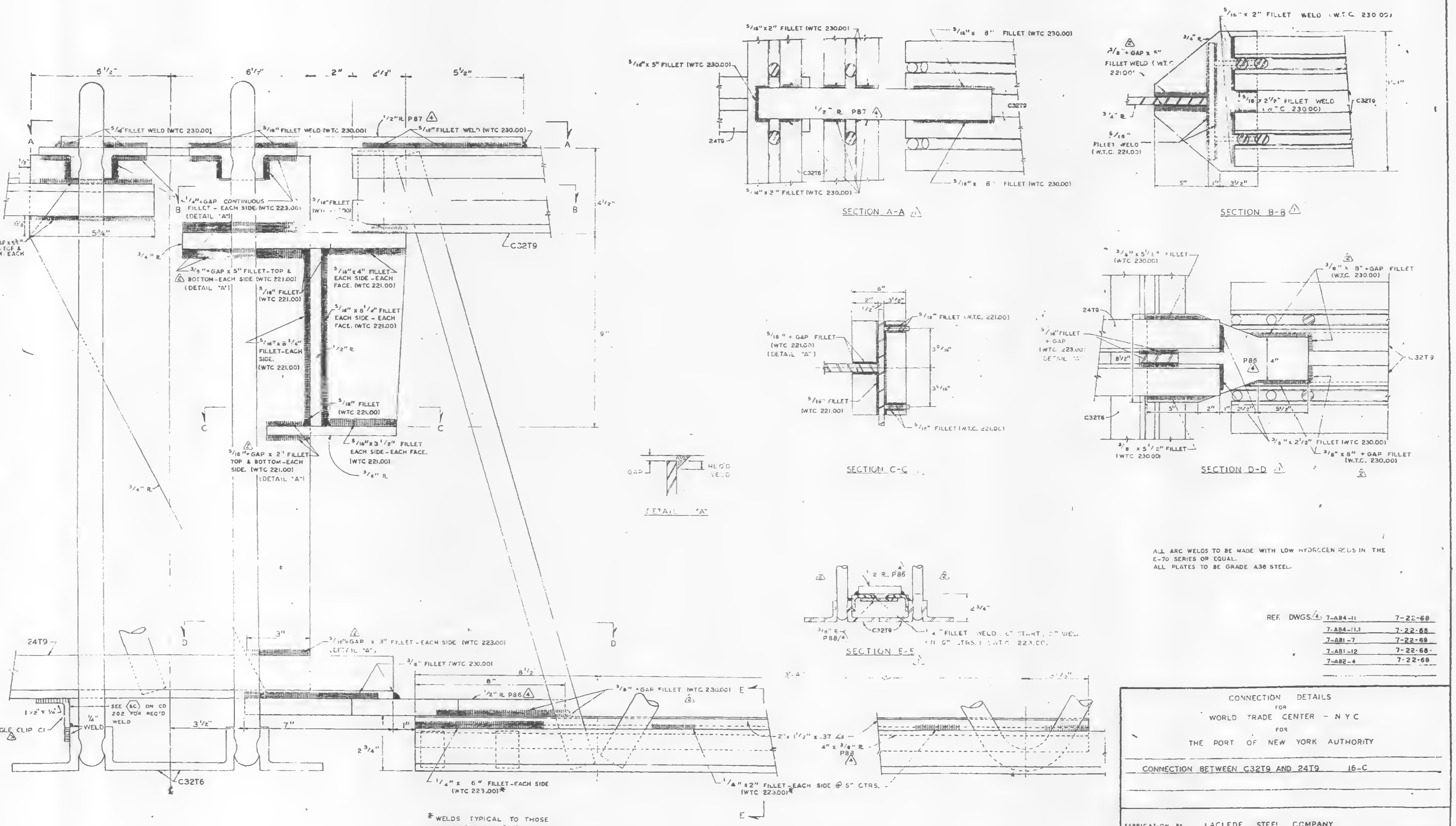
REF. DWGS.		
	7-AB4-11	5-8-68
	7-AB4-11.1	5-8-68
	7-AB1-7	4-15-68
	7-AB1-12	4-1-68
	7-AB2-4	4-1-68

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB4-11 PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A DATE
DRAWN BY gdc DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA DATE MAY 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A C WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. CD 208

NO.	DATE	REVISION	BY


5 1/2"
6 1/2"
2"
2 1/2"
5 1/2"
A
B
C
D
E
1/2" R. P87 4
5/16" FILLET WELD (WTC 230.00)
1/4"+GAP CONTINUOUS FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
5/16" FILLET (WTC 230.00)
C32T9
4 1/2"
9"
5 3/4"
5/16"+GAP x 5 3/4" FILLET-TOP & BOTTOM-EACH SIDE
3/4" R
3/8"+GAP x 5" FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET-EACH SIDE. (WTC 221.00)
1/2" R
5/16"+GAP x 2" FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.00) (DETAIL "A")
5/16" x 3 1/2" FILLET EACH SIDE-EACH FACE. (WTC 221.00)
3/8" R
SECTION A-A 1
5/16" x 2" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00)
5/16" x 8" FILLET (WTC 230.00)
1/2" R. P87 4
24T9
C32T6
SECTION B-B 1
5/16" x 2" FILLET WELD (W.T.C. 230.00)
3/8"+GAP x 5" FILLET WELD (W.T.C. 221.00)
5/16" x 2 1/2" FILLET WELD (W.T.C. 230.00)
5/16" FILLET WELD (W.T.C. 221.00)
3/4" R
1'-1"
5"
1"
3 1/2"
SECTION C-C
6"
2"
3 1/2"
1/2"
3 9/16"
3 5/16"
5/16" FILLET (W.T.C. 221.00)
5/16" + GAP FILLET (WTC 221.00) (DETAIL "A")
5/16" FILLET (WTC 221.00)
DETAIL "A"
GAP
REQ'D WELD
SECTION D-D 1
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8" x 8" +GAP FILLET (W.T.C. 230.00)
5/16" FILLET + GAP (WTC 223.00) DETAIL "A"
8 1/2"
P86 4
4"
3/8" x 2 1/2" FILLET (WTC 230.00)
3/8" x 8" + GAP FILLET (W.T.C. 230.00)
3/8" x 5 1/2" FILLET (WTC 230.00)
SECTION E-E
1/2" R. P86
2 3/4"
3/8" R. P88 4
1/4" FILLET WELD
5/16"+GAP x 3" FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
3/8" FILLET (WTC 230.00)
3"
8"
8 1/2"
1/2" R. P86 4
3/8" +GAP FILLET (WTC 230.00) 2
1 1/2" x 1/4"
ANGLE CLIP C1 3
1/4" WELD
SEE 16C ON CD 202 FOR REQ'D WELD
3 1/2"
7"
1"
2 3/4"
C32T6
2" x 1 1/2" x .37 Ls
4" x 3/8" R. P88 4
1/4" x 6" FILLET-EACH SIDE (WTC 223.00)*
1/4" x 2" FILLET-EACH SIDE @ 5" CTRS. (WTC 223.00)*

*WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E-E)

C32T9 TO 24T9 CONNECTION DETAIL (16-C) 1

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

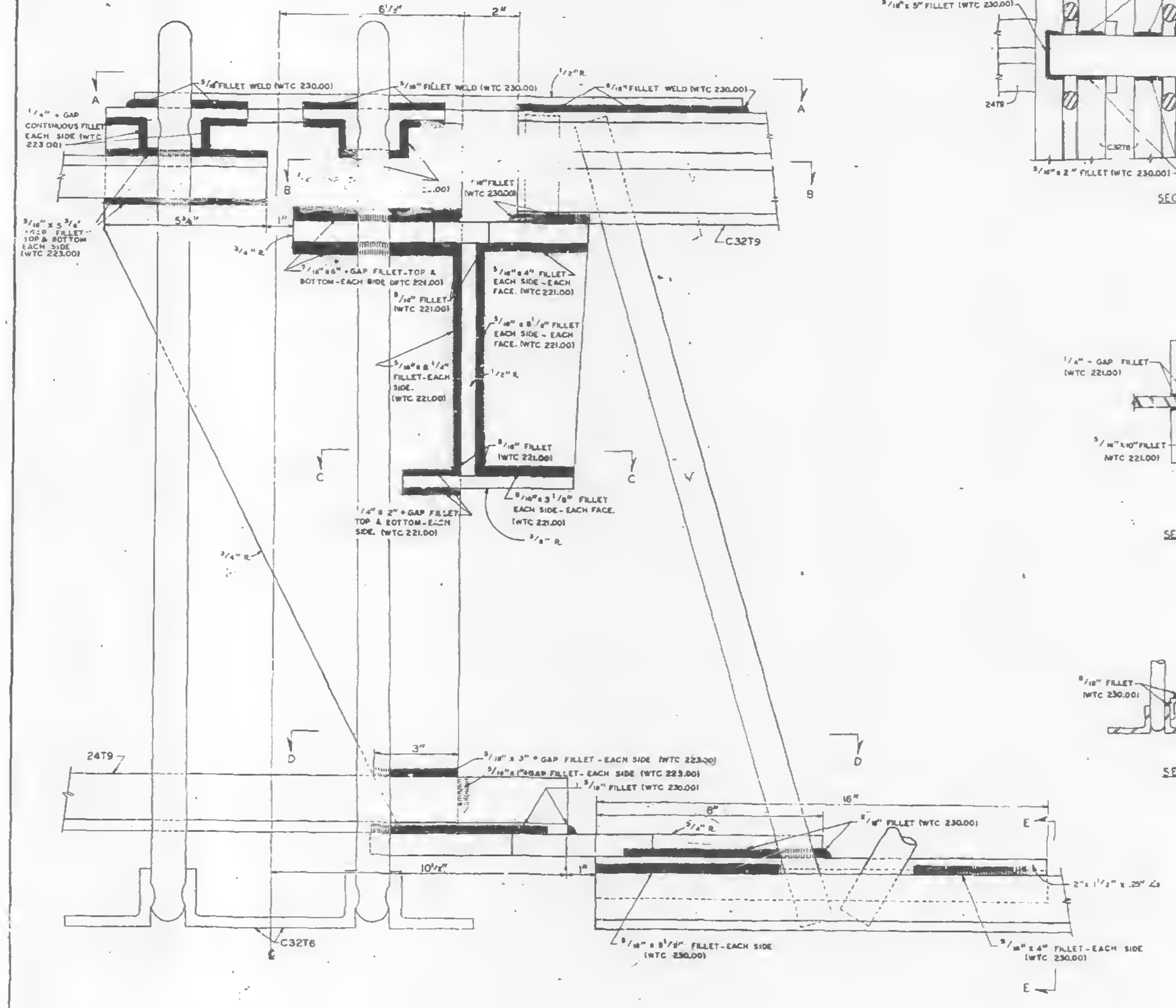
REF. DWGS. 4		
	7-AB4-11	7-22-68
	7-AB4-11.1	7-22-68
	7-AB1-7	7-22-68
	7-AB1-12	7-22-68
	7-AB2-4	7-22-68

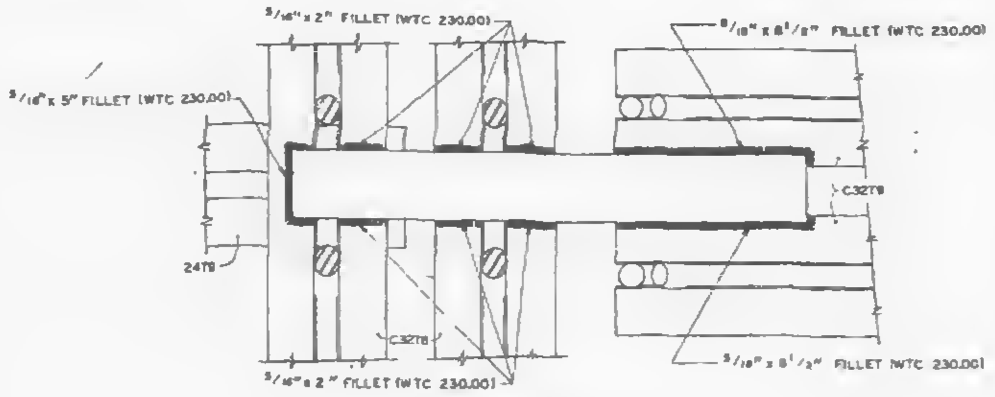
NO	DATE	REVISION	BY
4	4-3-69	AS NOTED	R.J.P.
3	7-10-68	ANGLE CLIP C1	T.M.C.
2	8-27-68	AS NOTED	T.M.C.
1	6-20-68	GENERAL	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

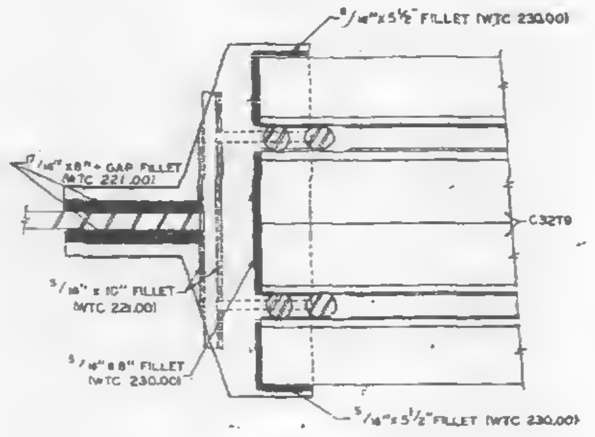
CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB4-11
PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 4/15/69
DRAWN BY gdc
DATE MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M.CHURA
DATE MAY 15, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY A.C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO. CD 208

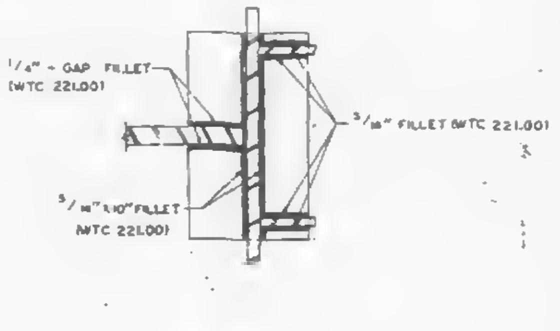

6 1/2"
2"
A
A
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
1/2" R.
5/16" FILLET WELD (WTC 230.00)
1/4" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00)
B
B
5/16" FILLET (WTC 230.00)
5/16" x 5 3/4" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
5 3/4"
1"
3/4" R.
C32T9
5/16" x 6" + GAP FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.00)
5/16" FILLET (WTC 221.00)
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET-EACH SIDE. (WTC 221.00)
1/2" R.
5/16" FILLET (WTC 221.00)
C
C
1/4" x 2" + GAP FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.00)
5/16" x 3 1/8" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
3/8" R.
3/4" R.
D
D
24T9
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00)
5/16" x 1" + GAP FILLET - EACH SIDE (WTC 223.00)
5/16" FILLET (WTC 230.00)
16"
8"
5/4" R.
5/16" FILLET (WTC 230.00)
E
E
10 1/2"
1"
2" x 1 1/2" x .25" ∠s
C32T6
℄
5/16" x 9 1/2" FILLET-EACH SIDE (WTC 230.00)
5/16" x 4" FILLET-EACH SIDE (WTC 230.00)


5/16" x 2" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00)
5/16" x 8 1/2" FILLET (WTC 230.00)
24T9
C32T9
C32T8
5/16" x 2" FILLET (WTC 230.00)
5/16" x 8 1/2" FILLET (WTC 230.00)

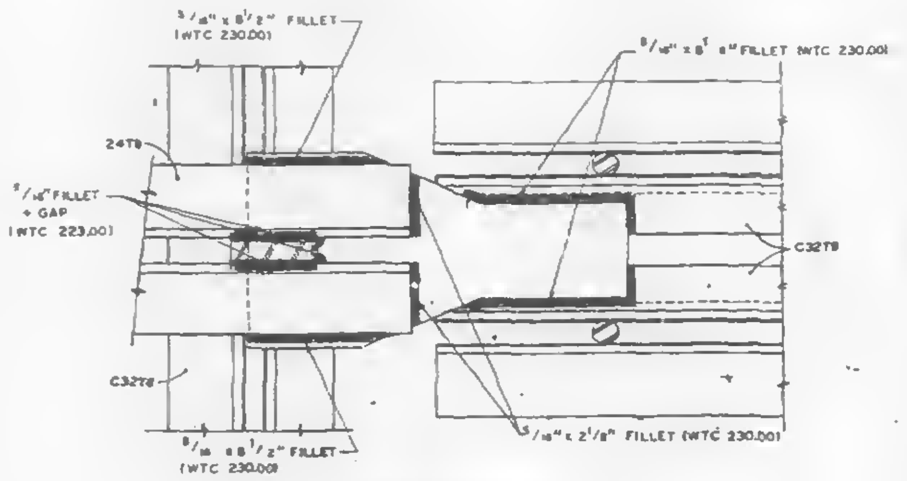
SECTION A-A


5/16" x 5 1/2" FILLET (WTC 230.00)
5/16" x 8" + GAP FILLET (WTC 221.00)
C32T9
5/16" x 10" FILLET (WTC 221.00)
5/16" x 8" FILLET (WTC 230.00)
5/16" x 5 1/2" FILLET (WTC 230.00)

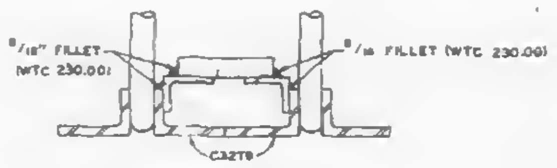
SECTION B-B


1/4" + GAP FILLET (WTC 221.00)
5/16" FILLET (WTC 221.00)
5/16" x 10" FILLET (WTC 221.00)

SECTION C-C


5/16" x 8 1/2" FILLET (WTC 230.00)
5/16" x 8 1/2" FILLET (WTC 230.00)
24T9
5/16" FILLET + GAP (WTC 223.00)
C32T9
C32T8
5/16" x 8 1/2" FILLET (WTC 230.00)
5/16" x 2 1/8" FILLET (WTC 230.00)

SECTION D-D



SECTION E-E

ALL ARC WELDS TO BE MADE WITH LOW HYDOGEN RODS IN THE E-70 SERIES OR EQUAL.

REF. DWGS.		
	7-A9A-11	5-8-68
	7-A94-11.1	5-8-68
	7-A81-7	4-15-68
	7-A81-12	4-1-68
	7-A92-4	4-1-68

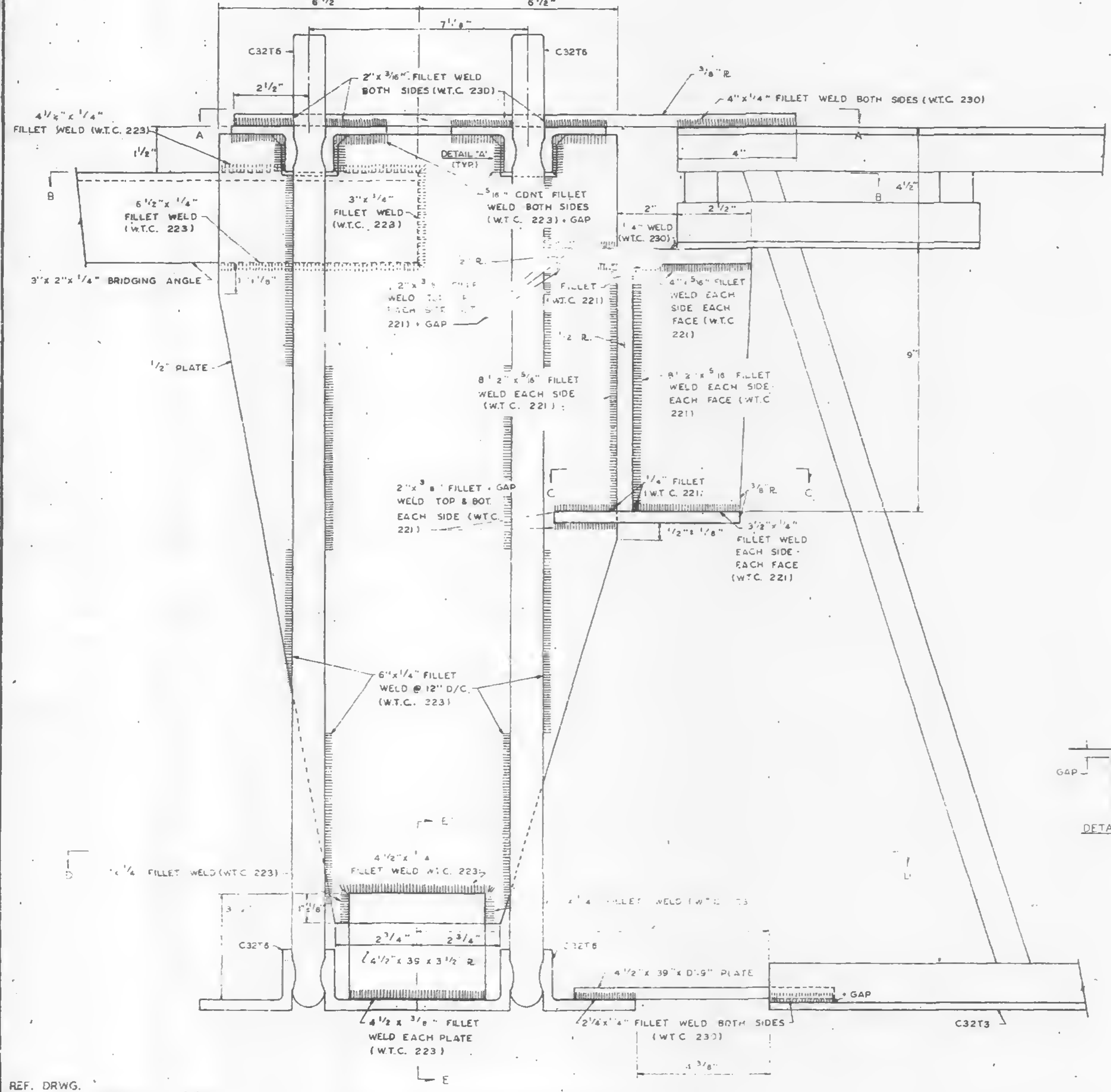
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A94-11	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD 208

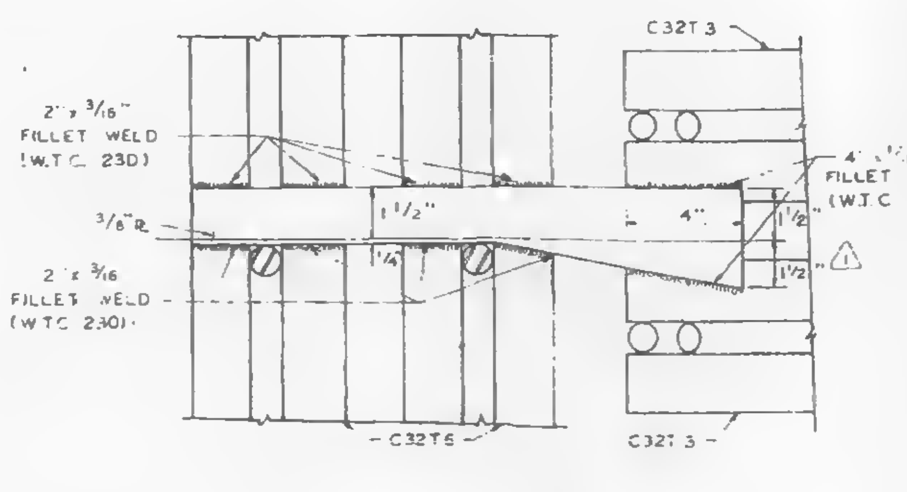
NO.	DATE	REVISION	BY


6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
2" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" R
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
2 1/2"
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1 1/2"
A
A
DETAIL "A" (TYP)
4"
4 1/2"
B
B
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
3" x 1/4" FILLET WELD (W.T.C. 223)
5/16" CONT. FILLET WELD BOTH SIDES (W.T.C. 223) + GAP
2"
2 1/2"
1/4" WELD (W.T.C. 230)
3" x 2" x 1/4" BRIDGING ANGLE
1/2" PLATE
FILLET (W.T.C. 221)
4" x 5/16" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
1/2" R
9"
8 1/2" x 5/16" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2" x 5/16" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
2" x 3/8" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" R
C
C
1/2" x 1/8"
3 1/2" x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
6" x 1/4" FILLET WELD @ 12" O/C (W.T.C. 223)
E
D
D
1/4" FILLET WELD (W.T.C. 223)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1 5/8"
C32T6
2 3/4"
2 3/4"
4 1/2" x 39 x 3 1/2 R
C32T6
4 1/2" x 39" x 0'-9" PLATE
+ GAP
4 1/2 x 3/8" FILLET WELD EACH PLATE (W.T.C. 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 3/8"
C32T3
E

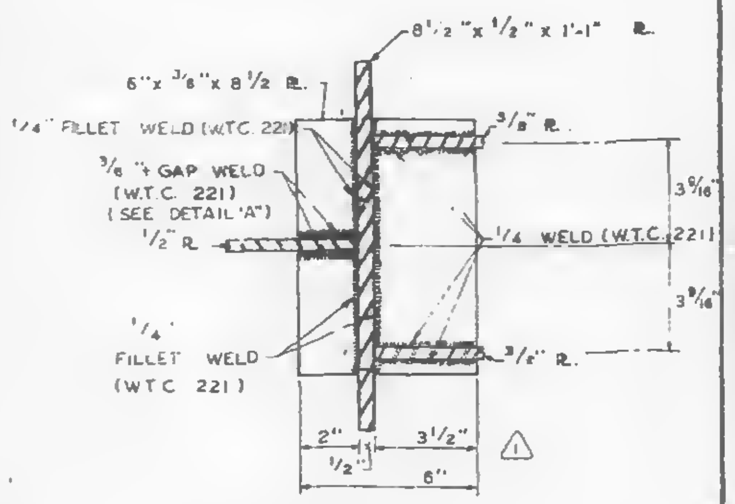
REF. DRWG.
7-AB4-11.3 5-6-68
7-AB4-12 5-6-68
7-AB1-6 5-10-68
7-AB1-12 5-10-68

C32T3 TO 3" x 2" CONNECTION DETAIL (13-C)

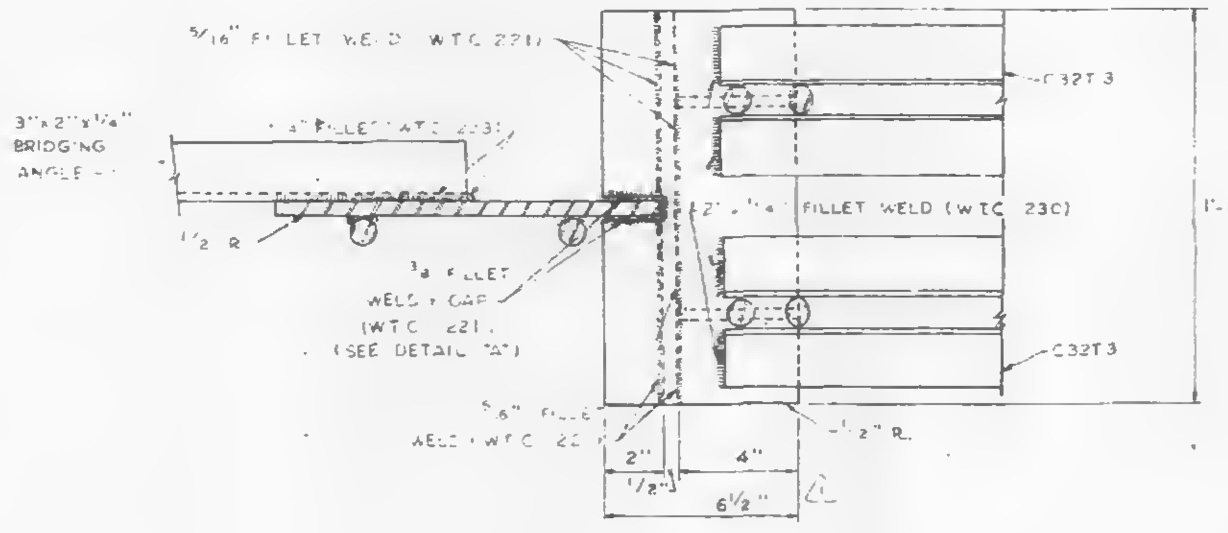
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A36. /1\


C32T3
2" x 3/16" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET WELD (W.T.C. 230)
3/8" R
1 1/2"
4"
1/2"
1/2"
2" x 3/16" FILLET WELD (W.T.C. 230)
C32T6
C32T3

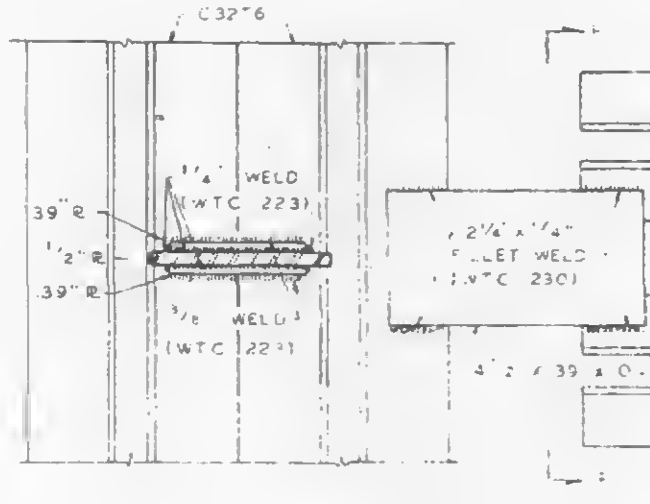
SECTION A-A

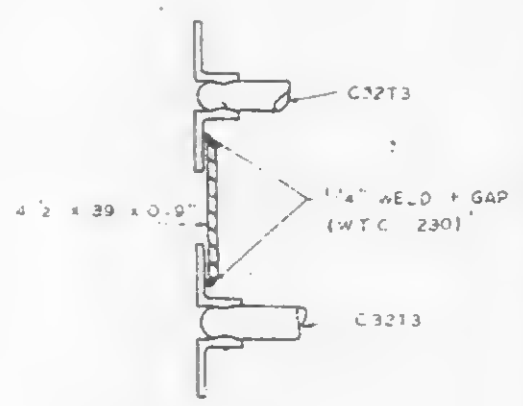


SECTION C-C

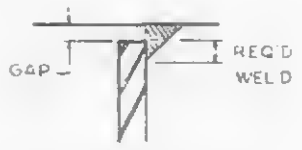

5/16" FILLET WELD (W.T.C. 221)
3" x 2" x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C. 223)
C32T3
1/2" R
2" x 1/4" FILLET WELD (W.T.C. 230)
1'-1"
3/8" FILLET WELD + GAP (W.T.C. 221) (SEE DETAIL "A")
5/16" FILLET WELD (W.T.C. 221)
C32T3
2"
4"
1/2" R
1/2"
6 1/2"

SECTION B-B

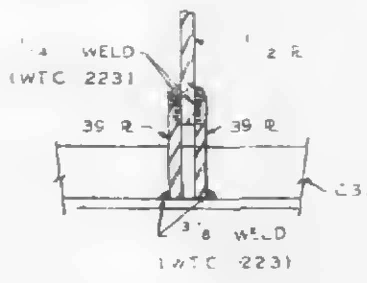




SECTION F-F



DETAIL "A"



SECTION E-E

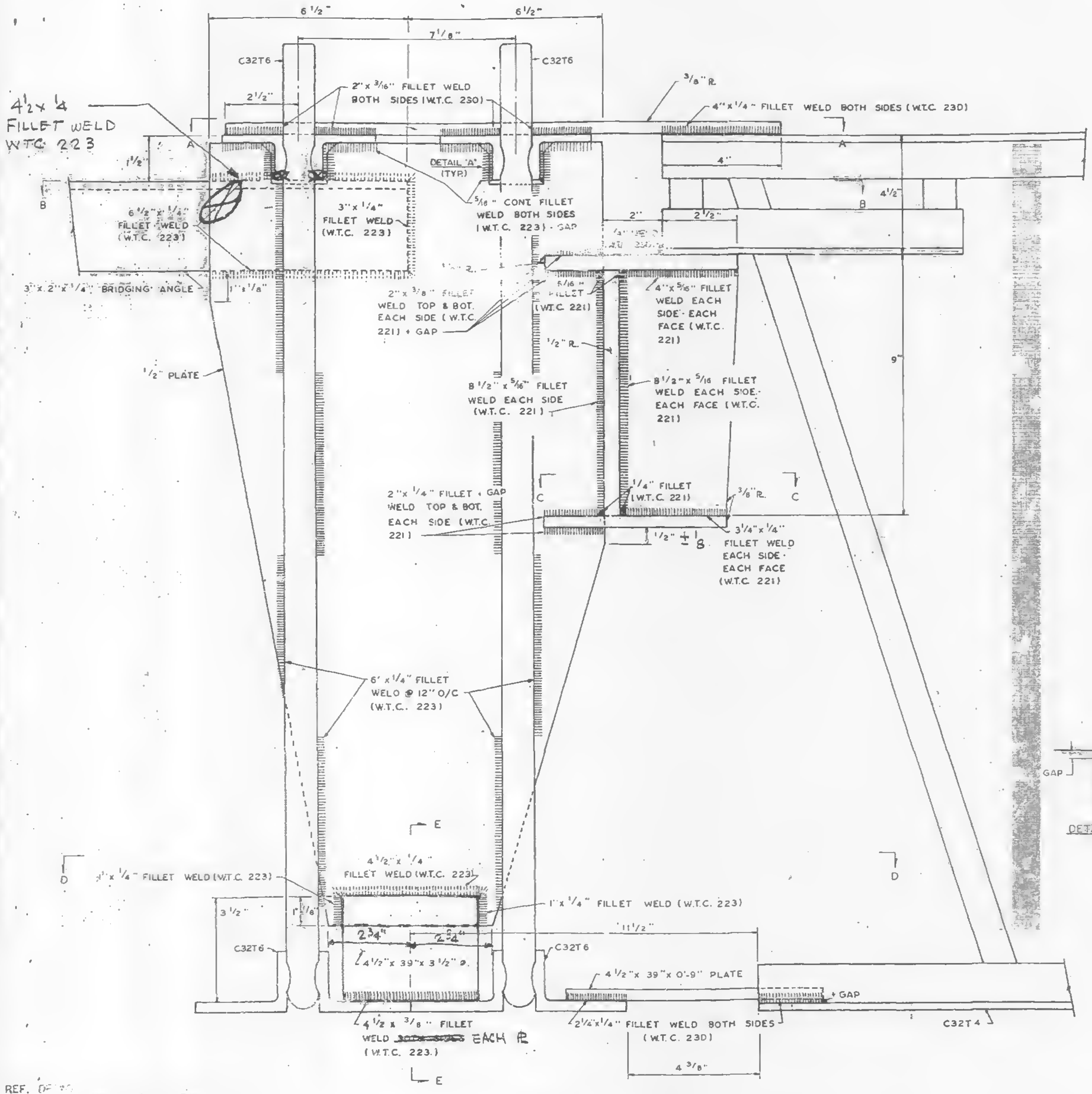
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T3 CONNECTION TO 3" x 2" BRIDGING ANGLE, DETAIL 13-C

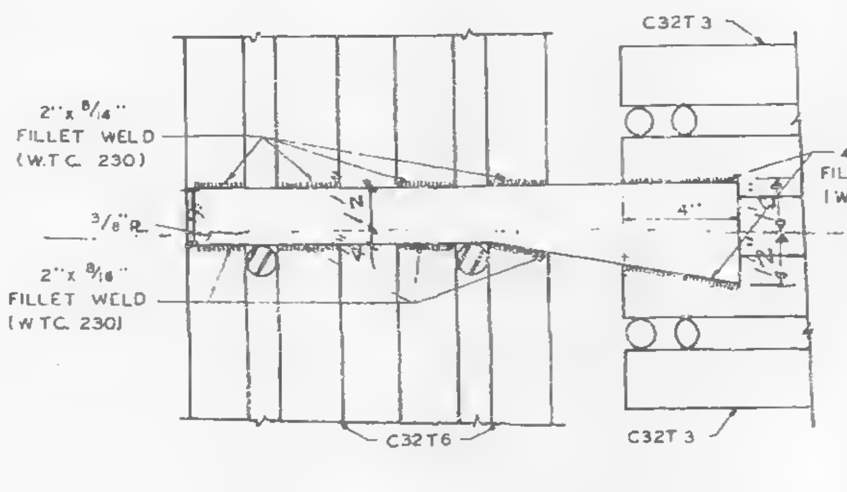
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13 5-17-68	PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A.	DATE 6/25/68	DRAWN BY J.A. DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHIRA DATE MAY 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 209

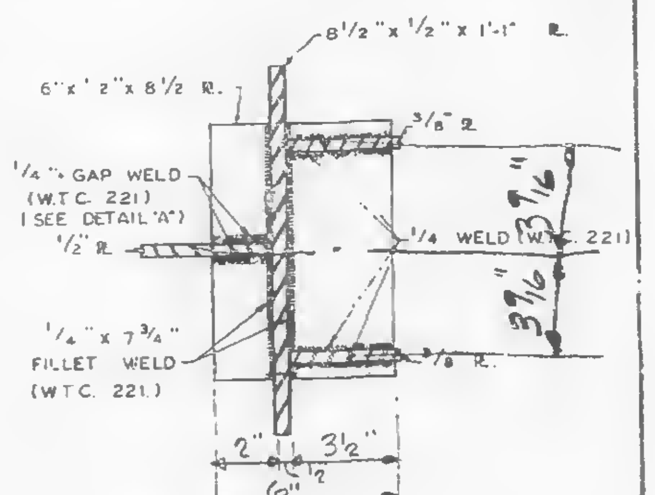
NO	DATE	REVISION	BY
/1\	6-20-68	DIMENSIONS ADDED, NOTE TWO	L.W.H.


4½x¼
FILLET WELD
WTC 223
6½"
6½"
7⅛"
C32T6
C32T6
2½"
2" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" R
4" x ¼" FILLET WELD BOTH SIDES (W.T.C. 230)
A
A
1½"
DETAIL "A" (TYP.)
6½" x ¼" FILLET WELD (W.T.C. 223)
3" x ¼" FILLET WELD (W.T.C. 223)
5/16" CONT. FILLET WELD BOTH SIDES (W.T.C. 223) + GAP
4"
4½"
B
B
2"
2½"
3" x 2" x ¼" BRIDGING ANGLE
1⅛"
2" x 3/8" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
5/16" FILLET (W.T.C. 221)
4" x 5/16" FILLET WELD EACH SIDE · EACH FACE (W.T.C. 221)
½" PLATE
½" R
9"
8½" x 5/16" FILLET WELD EACH SIDE (W.T.C. 221)
8½" x 5/16" FILLET WELD EACH SIDE · EACH FACE (W.T.C. 221)
2" x ¼" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
¼" FILLET (W.T.C. 221)
3/8" R
C
C
½" ± ⅛
3¾" x ¼" FILLET WELD EACH SIDE · EACH FACE (W.T.C. 221)
6" x ¼" FILLET WELD @ 12" O/C (W.T.C. 223)
E
D
D
¼" FILLET WELD (W.T.C. 223)
4½" x ¼" FILLET WELD (W.T.C. 223)
1" x ¼" FILLET WELD (W.T.C. 223)
11½"
3½"
C32T6
C32T6
2¾"
2¼"
4½" x 39" x 3½" R
4½" x 39" x 0'-9" PLATE
+ GAP
4½ x 3/8" FILLET WELD ~~BOTH SIDES~~ EACH R (W.T.C. 223.)
2¼" x ¼" FILLET WELD BOTH SIDES (W.T.C. 230)
C32T4
4⅜"
E

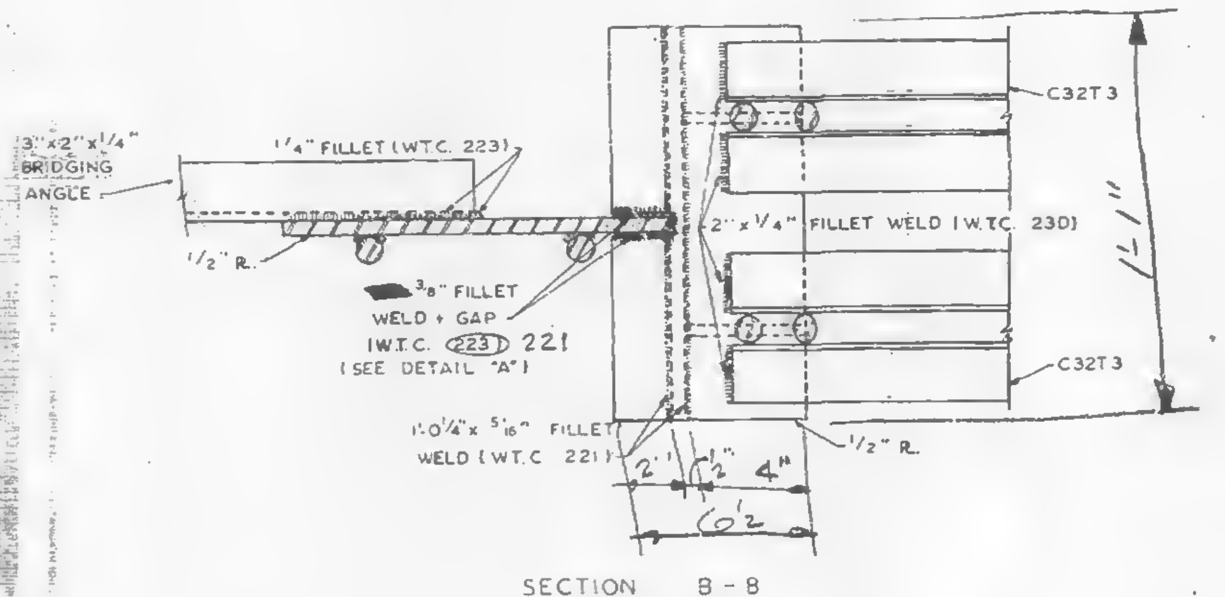
C32T3 TO 3" x 2" CONNECTION DETAIL (13-C)


C32T3
2" x 3/16" FILLET WELD (W.T.C. 230)
3/8" R
2" x 3/16" FILLET WELD (W.T.C. 230)
4" x ¼" FILLET WELD (W.T.C. 230)
4"
C32T6
C32T3

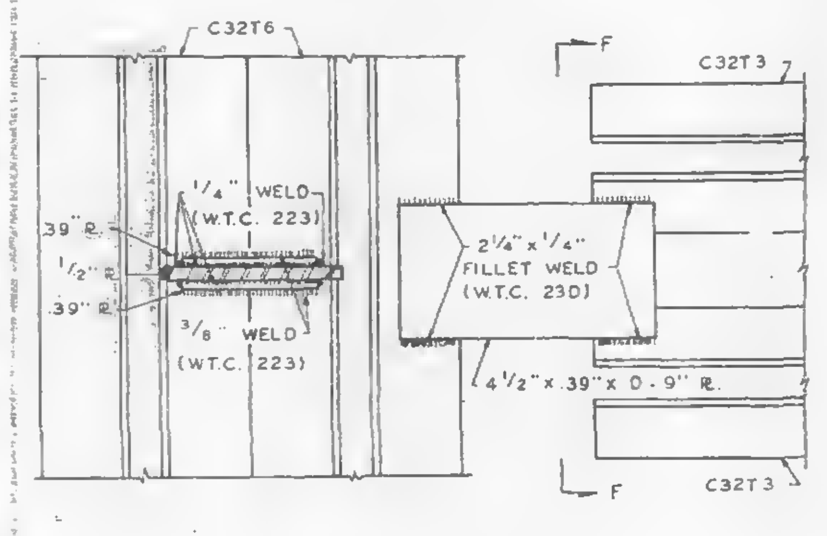
SECTION A-A



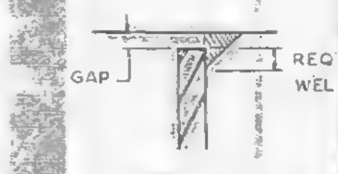
SECTION C-C


3" x 2" x ¼" BRIDGING ANGLE
¼" FILLET (W.T.C. 223)
½" R
3/8" FILLET WELD + GAP (W.T.C. 221) (SEE DETAIL "A")
2" x ¼" FILLET WELD (W.T.C. 230)
C32T3
C32T3
1'-1"
1'-0¼" x 5/16" FILLET WELD (W.T.C. 221)
½" R
2"
4"
6½"

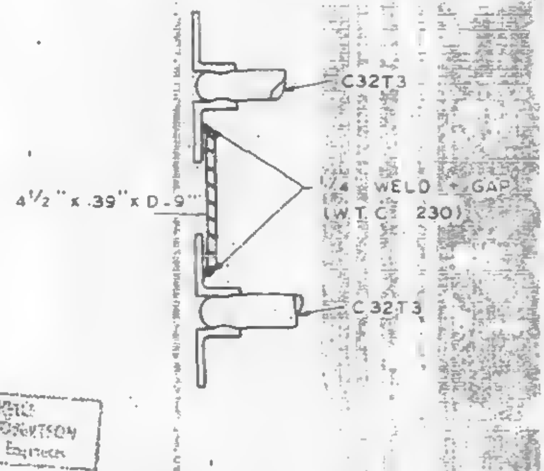
SECTION B-B



SECTION D-D

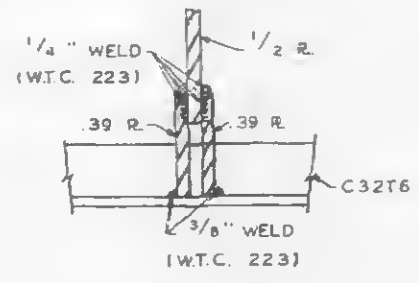


DETAIL "A"



SECTION F-F

6/3/68 aab



SECTION E-E

REF. DWGS.

7-AB4-11.3	5-17-68
7-AB4-13.2	5-17-68
7-AB1-6	4-15-68
7-AB1-12	4-1-68

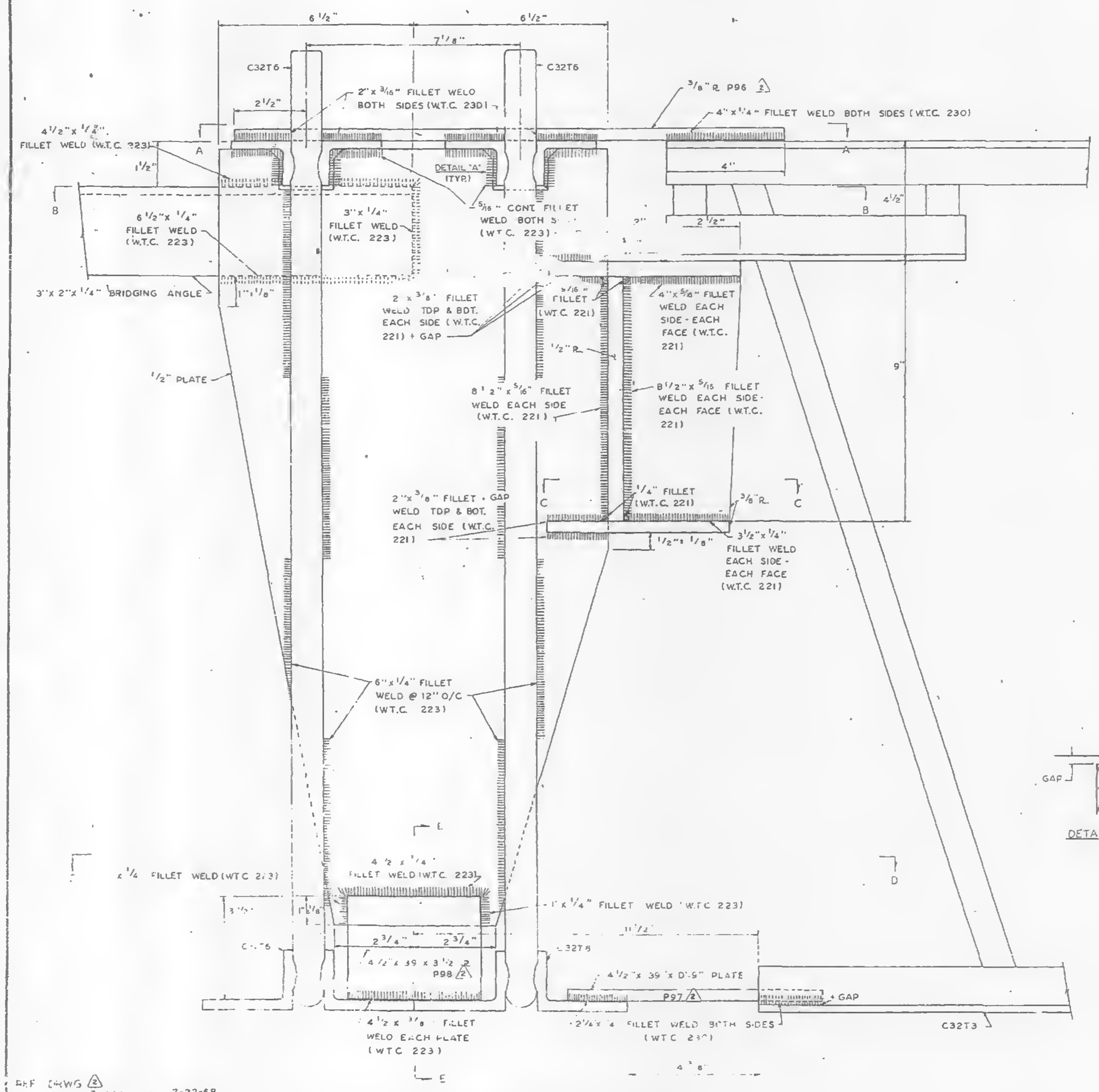
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATE TO BE ASTM A36

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T3 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 13-C

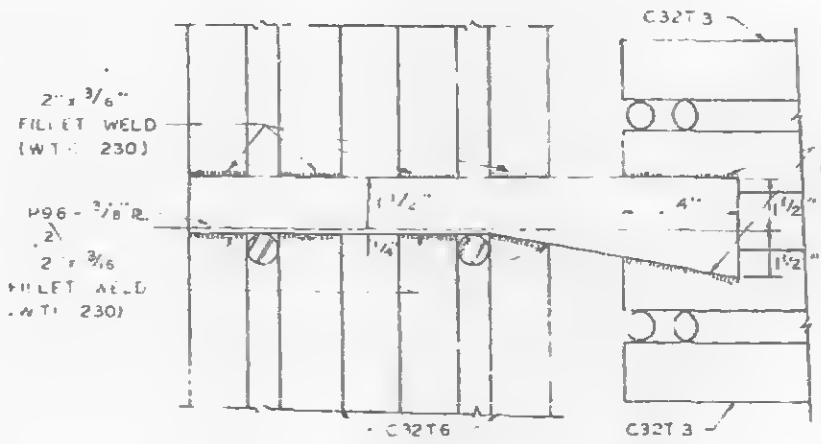
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13 5-17-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY LACLEDE STEEL CO. FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO CD 209

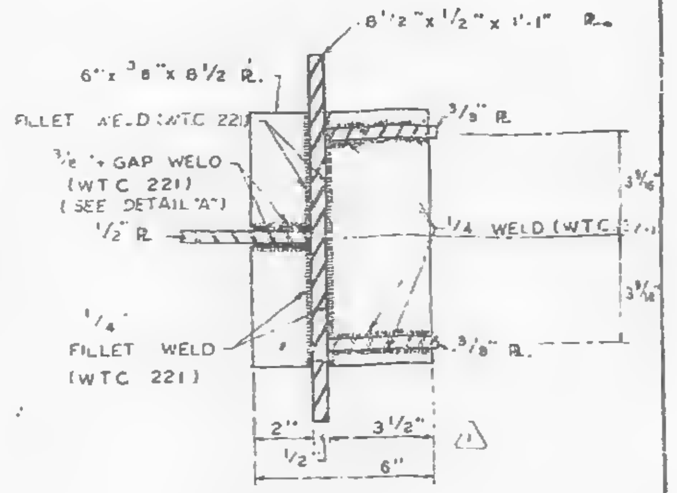

6 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
2 1/2"
2" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" R P96 2
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1 1/2"
A
A
B
B
DETAIL "A" (TYP.)
4"
4 1/2"
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
3" x 1/4" FILLET WELD (W.T.C. 223)
5/16" CONT. FILLET WELD BOTH SIDES (W.T.C. 223)
2 1/2"
3" x 2" x 1/4" BRIDGING ANGLE
1 1/8"
2 x 3/8" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
5/16" FILLET (W.T.C. 221)
4" x 5/8" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
1/2" PLATE
1/2" R
9"
8 1/2" x 5/16" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2" x 5/16" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
2" x 3/8" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" R
C
C
1/2" x 1/8"
3 1/2" x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
6" x 1/4" FILLET WELD @ 12" O/C (W.T.C. 223)
E
D
D
1/4 FILLET WELD (W.T.C. 223)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1" x 1/4" FILLET WELD (W.T.C. 223)
2 3/4"
2 3/4"
11 1/2"
4 1/2" x 39 x 3 1/2 P98 2
C32T6
C32T6
4 1/2" x 39" x D-9" PLATE
P97 2
+ GAP
C32T3
4 1/2 x 3/8 FILLET WELD EACH PLATE (WTC 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/8"
E

REF. DRWG 2
7-A84 ... 7-22-68
7-A84 12.2 10-15-68
7-A8 6 7-22-68
7-22-68

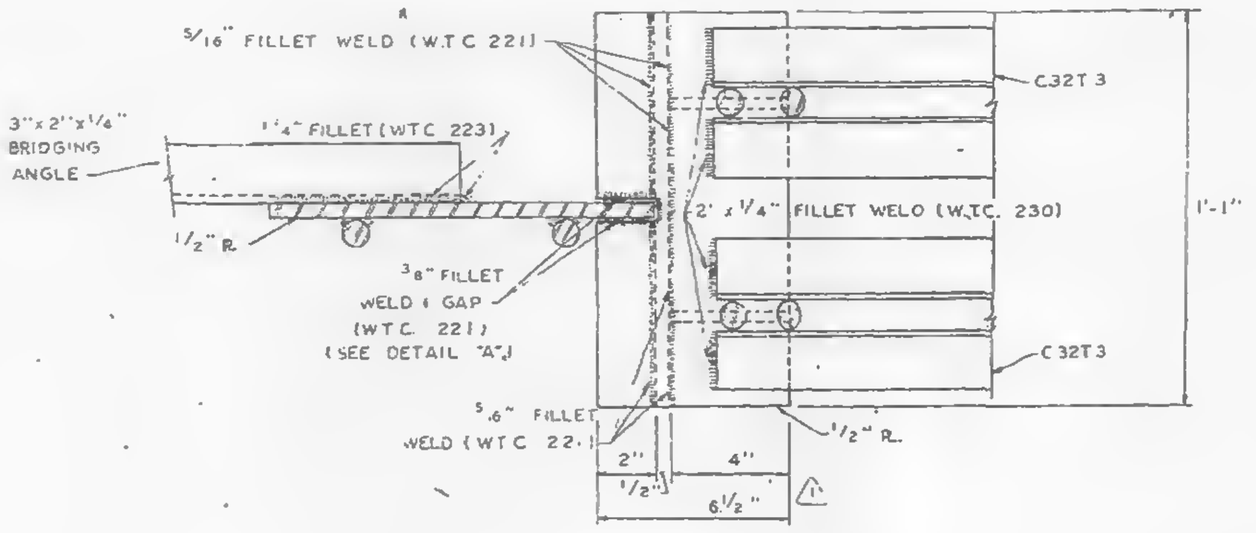
C32 TO 3" x 2" CONNECTION DETAIL (13-C)


C32T3
2" x 3/16" FILLET WELD (WTC 230)
4" x 4" FILLET WELD (WTC 230)
P96 - 3/8" R 2
2" x 3/16" FILLET WELD (WTC 230)
1 1/2"
4"
1/4
1/2
1
C32T6
C32T3

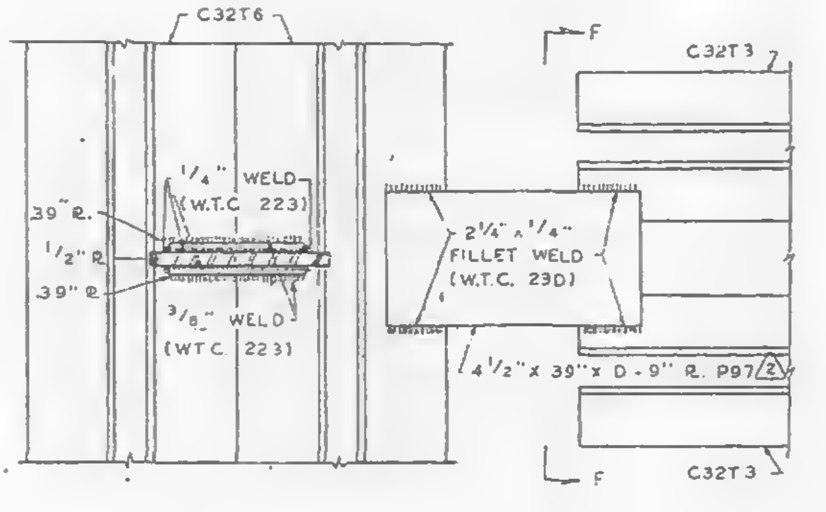
SECTION A-A



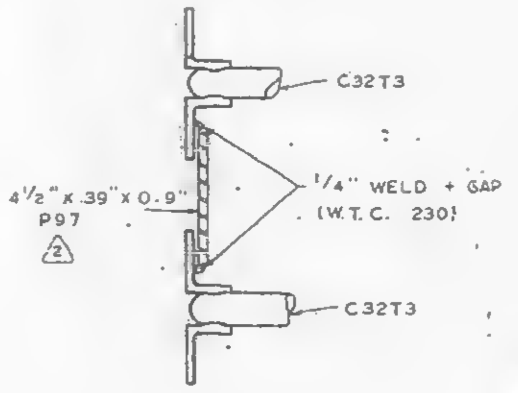
SECTION C-C


5/16" FILLET WELD (W.T.C. 221)
3" x 2" x 1/4" BRIDGING ANGLE
1/4" FILLET (WTC 223)
C32T3
2" x 1/4" FILLET WELD (W.T.C. 230)
1'-1"
1/2" R
3/8" FILLET WELD + GAP (WTC 221) (SEE DETAIL "A")
C32T3
5/16" FILLET WELD (WTC 221)
1/2" R.
2"
4"
1/2"
6 1/2"
1

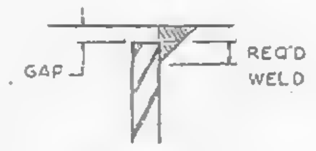
SECTION B-B



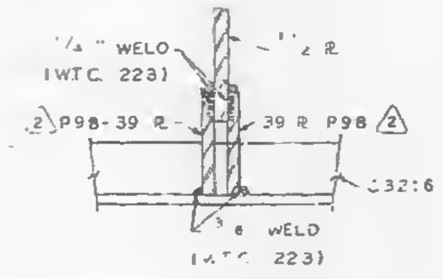
SECTION D-D



SECTION F-F



DETAIL "A"



SECTION E-E

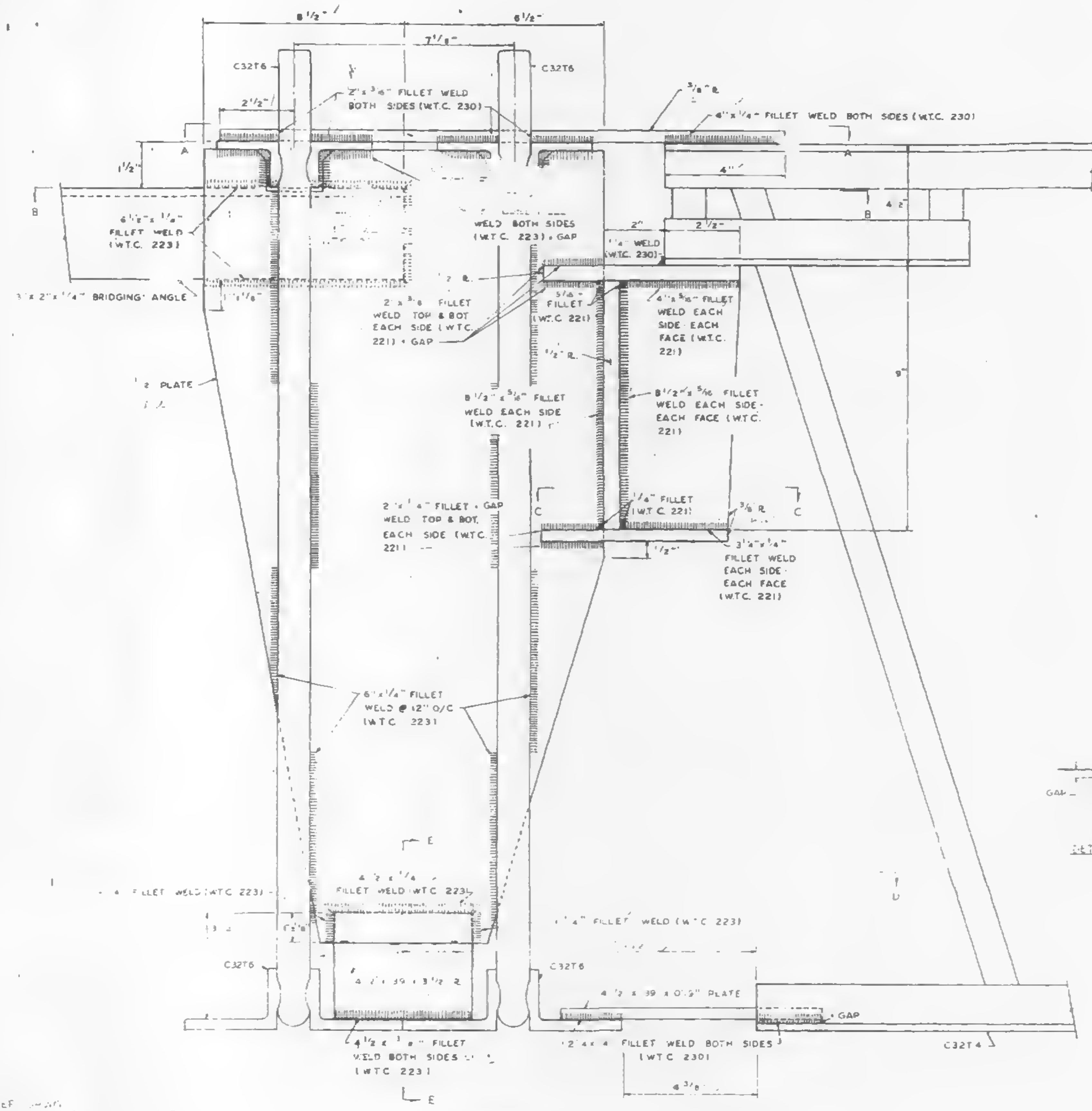
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T3 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 13-C

FABRICATION BY. LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13 5-17-68	PLATE
APPROVED FOR FABRICATION BY James DeRicco FOR P.O.N.Y.A.	DATE 4/15/69	DRAWN BY R.A. DATE MAY 13, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD 209

NO	DATE	REVISION	BY
2	4-3-69	AS NOTED	R.J.P.
1	6-20-68	DIMENSIONS ADDED, NOTE TWO	L.A.H.

1. ALL [illegible] OR [illegible]
[illegible]
2. ALL PLATES TO BE ASTM A36. 1

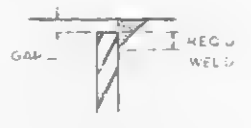

8 1/2"
6 1/2"
7 1/8"
C32T6
C32T6
2" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" R
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
A
A
2 1/2"
1 1/2"
B
B
6 1/2" x 1/2" FILLET WELD (W.T.C. 223)
WELD BOTH SIDES (W.T.C. 223) + GAP
3" x 2" x 1/4" BRIDGING ANGLE
1/4" WELD (W.T.C. 230)
2" x 3/8" FILLET WELD TOP & BOT EACH SIDE (W.T.C. 221) + GAP
5/16" FILLET (W.T.C. 221)
4" x 5/16" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
1/2" PLATE
8 1/2" x 5/16" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2" x 5/16" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
9"
2" x 1/4" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" R
C
C
3" x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
6" x 1/4" FILLET WELD @ 12" O/C (W.T.C. 223)
E
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1/4" FILLET WELD (W.T.C. 223)
1/4" FILLET WELD (W.T.C. 223)
C32T6
C32T6
4 1/2" x 39 x 3 1/2" R
4 1/2" x 39 x 0'-9" PLATE
GAP
4 1/2" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 223)
2" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 3/8"
C32T4
E
D

REF. DWGS.

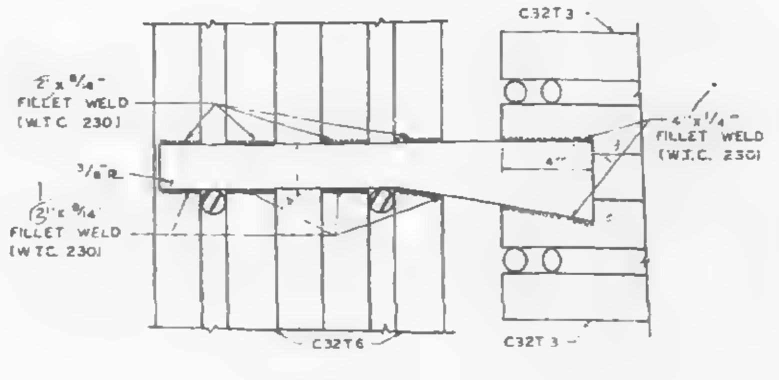
7-484-13 5-17-58
7-484-13.2 5-17-58
7-48 4-15-58
7-48 4 59

C32T3 TO 3" x 2" CONNECTION DETAIL (13-C)

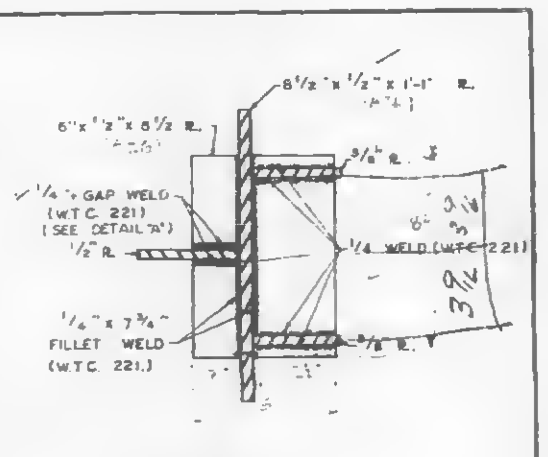
NOTE
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E70 SERIES OR EQUAL



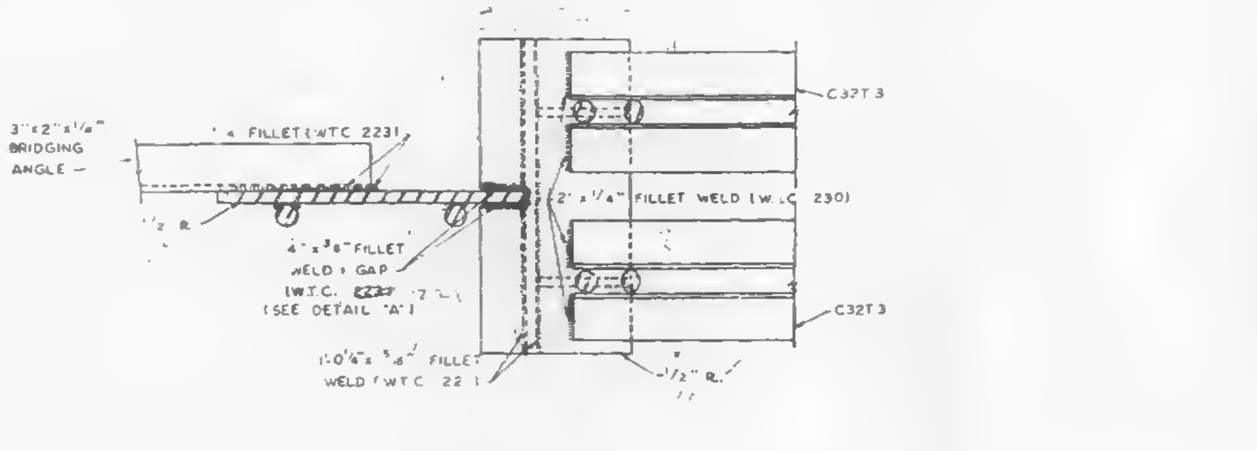
DETAIL "A"


C32T3
3" x 1/4" FILLET WELD (W.T.C. 230)
3/8" R
2" x 3/16" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET WELD (W.T.C. 230)
C32T6
C32T3

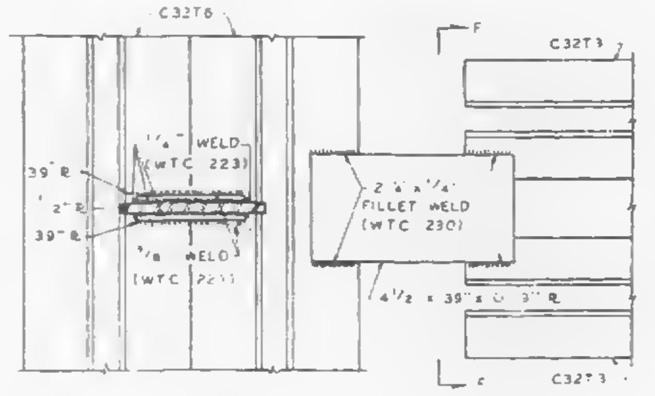
SECTION A-A


8 1/2" x 1/2" x 1'-1" R
6" x 2" x 8 1/2" R
3/8" R
1/4" + GAP WELD (W.T.C. 221) (SEE DETAIL "A")
1/2" R
1/4" WELD (W.T.C. 221)
1/4" x 7 3/4" FILLET WELD (W.T.C. 221)
3/8" R

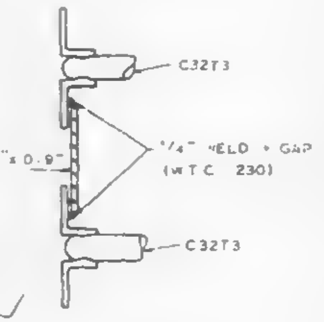
SECTION C-C


C32T3
3" x 2" x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C. 223)
1/2" R
2" x 1/4" FILLET WELD (W.T.C. 230)
4" x 3/8" FILLET WELD + GAP (W.T.C. 223) (SEE DETAIL "A")
1'-0 1/2" x 3/4" FILLET WELD (W.T.C. 221)
1/2" R
C32T3

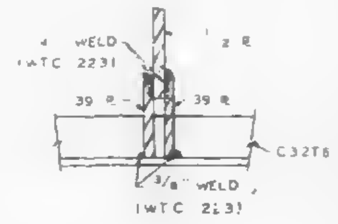
SECTION B-B



No Action



SECTION F-F



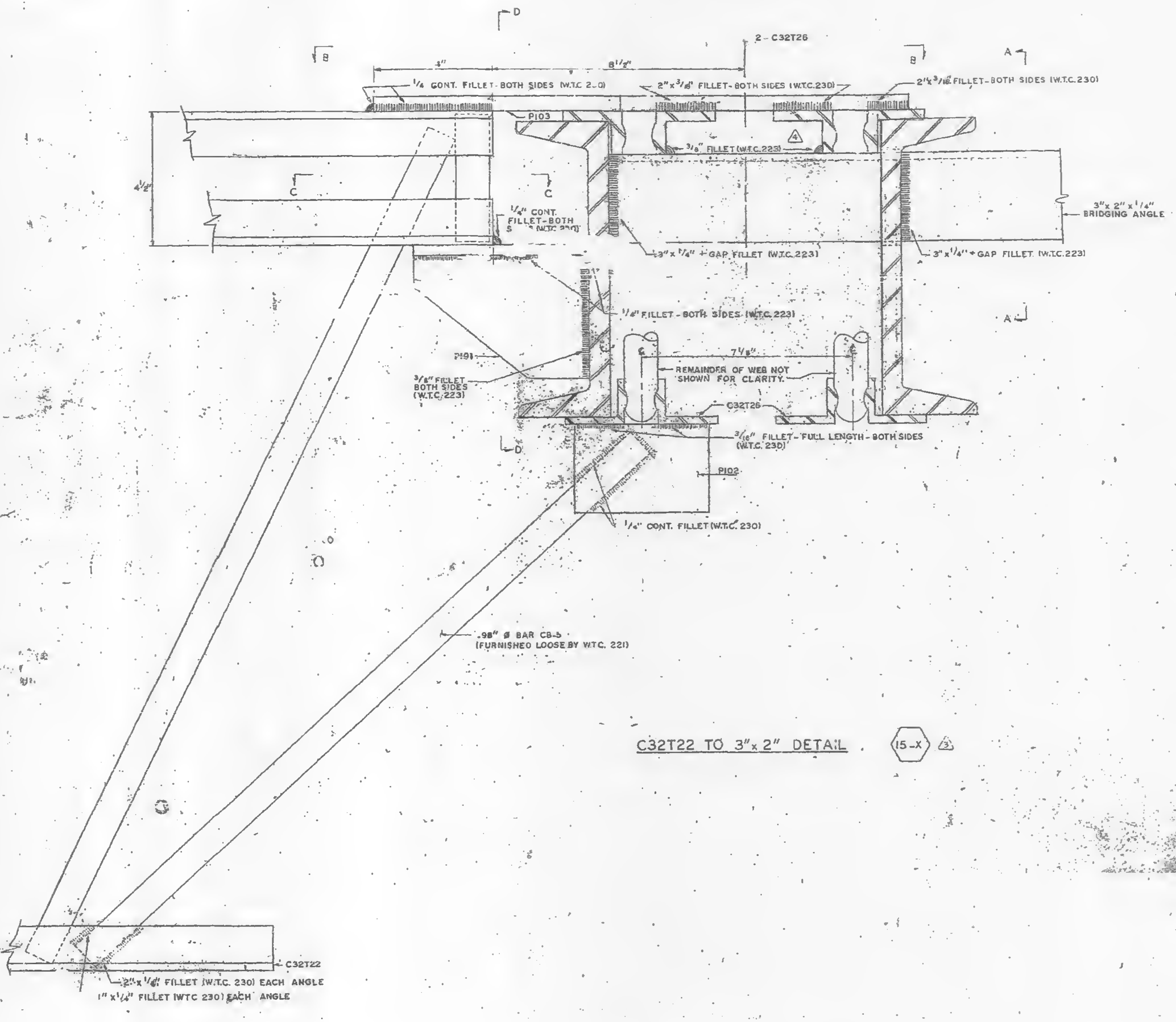
SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

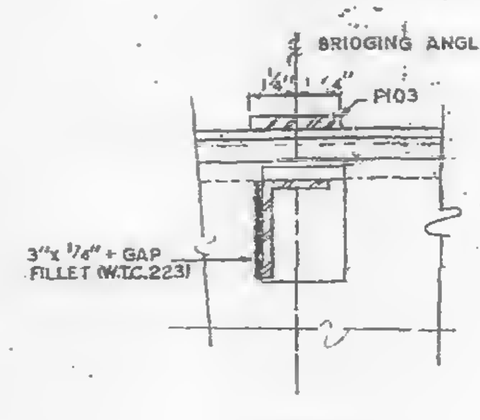
C32T3 CONNECTION TO 3" x 2" BRIDGING ANGLE, DETAIL 13-C

FABRICATION BY. LACLEDE STEEL COMPANY

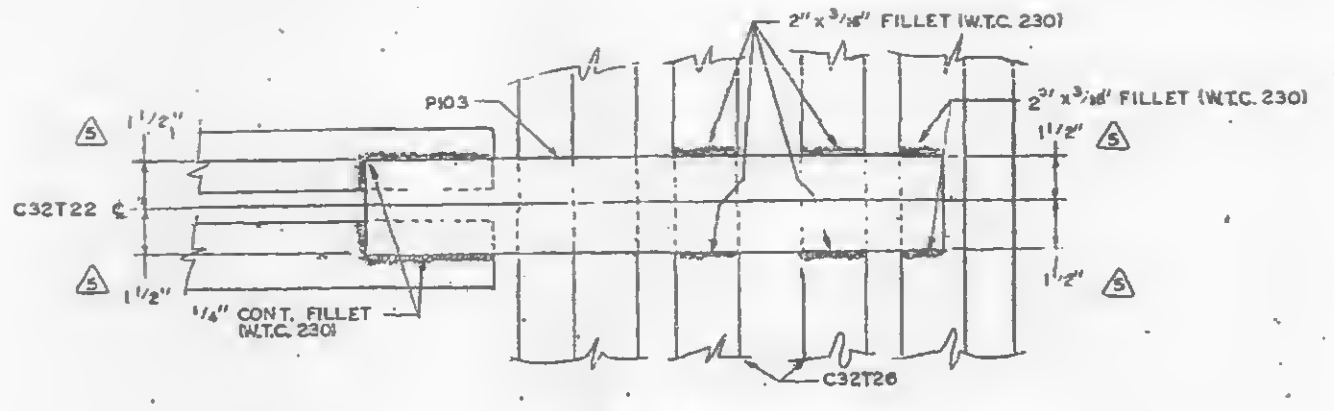
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-484-13 5-17-68 PLATE	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY. [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY LACLEDE STEEL CO.	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY. A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 209


D
2 - C32T26
B
B
A
4"
8 1/2"
1/4 CONT. FILLET - BOTH SIDES (W.T.C. 230)
2" x 3/16" FILLET - BOTH SIDES (W.T.C. 230)
2" x 3/16" FILLET - BOTH SIDES (W.T.C. 230)
P103
4
3/16" FILLET (W.T.C. 223)
4 1/2"
C
C
1/4" CONT. FILLET - BOTH SIDES (W.T.C. 230)
3" x 2" x 1/4" BRIDGING ANGLE
3" x 1/4" + GAP FILLET (W.T.C. 223)
3" x 1/4" + GAP FILLET (W.T.C. 223)
1/4" FILLET - BOTH SIDES (W.T.C. 223)
A
P101
3/8" FILLET BOTH SIDES (W.T.C. 223)
7 1/8"
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
C32T26
3/16" FILLET - FULL LENGTH - BOTH SIDES (W.T.C. 230)
D
P102
1/4" CONT. FILLET (W.T.C. 230)
.98" ⌀ BAR CB-5 (FURNISHED LOOSE BY W.T.C. 221)
C32T22
2" x 1/4" FILLET (W.T.C. 230) EACH ANGLE
1" x 1/4" FILLET (WTC 230) EACH ANGLE

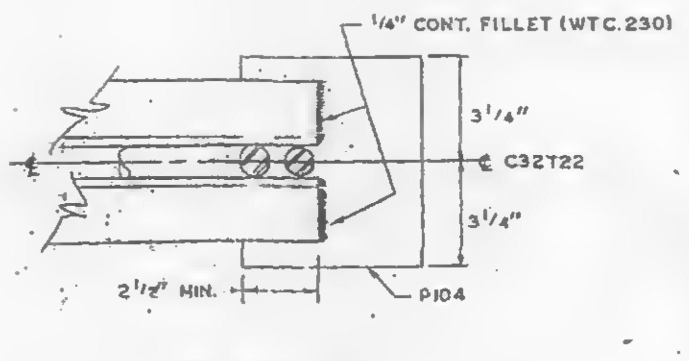
C32T22 TO 3" x 2" DETAIL (15-X) 3



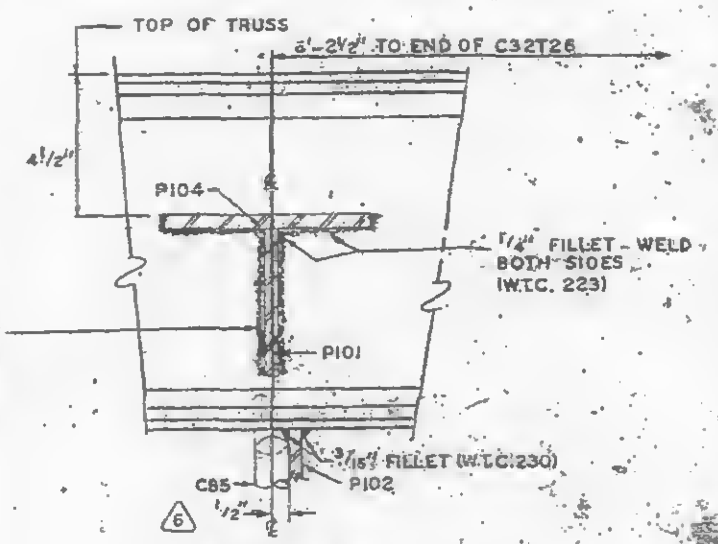
SECTION A-A


2" x 3/16" FILLET (W.T.C. 230)
2" x 3/16" FILLET (W.T.C. 230)
P103
5
1 1/2"
C32T22 ℄
5
1 1/2"
1/4" CONT. FILLET (W.T.C. 230)
1 1/2"
5
1 1/2"
5
C32T26

SECTION B-B



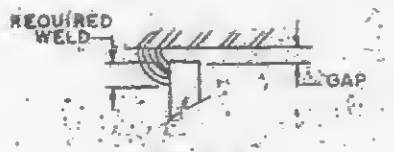
SECTION C-C


TOP OF TRUSS
3'-2 1/2" TO END OF C32T26
4 1/2"
P104
1/4" FILLET - WELD BOTH SIDES (W.T.C. 223)
3/8" FILLET BOTH SIDES (W.T.C. 223)
P101
3/16" FILLET (W.T.C. 230)
C85
P102
6
1/2"

SECTION D-D

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.



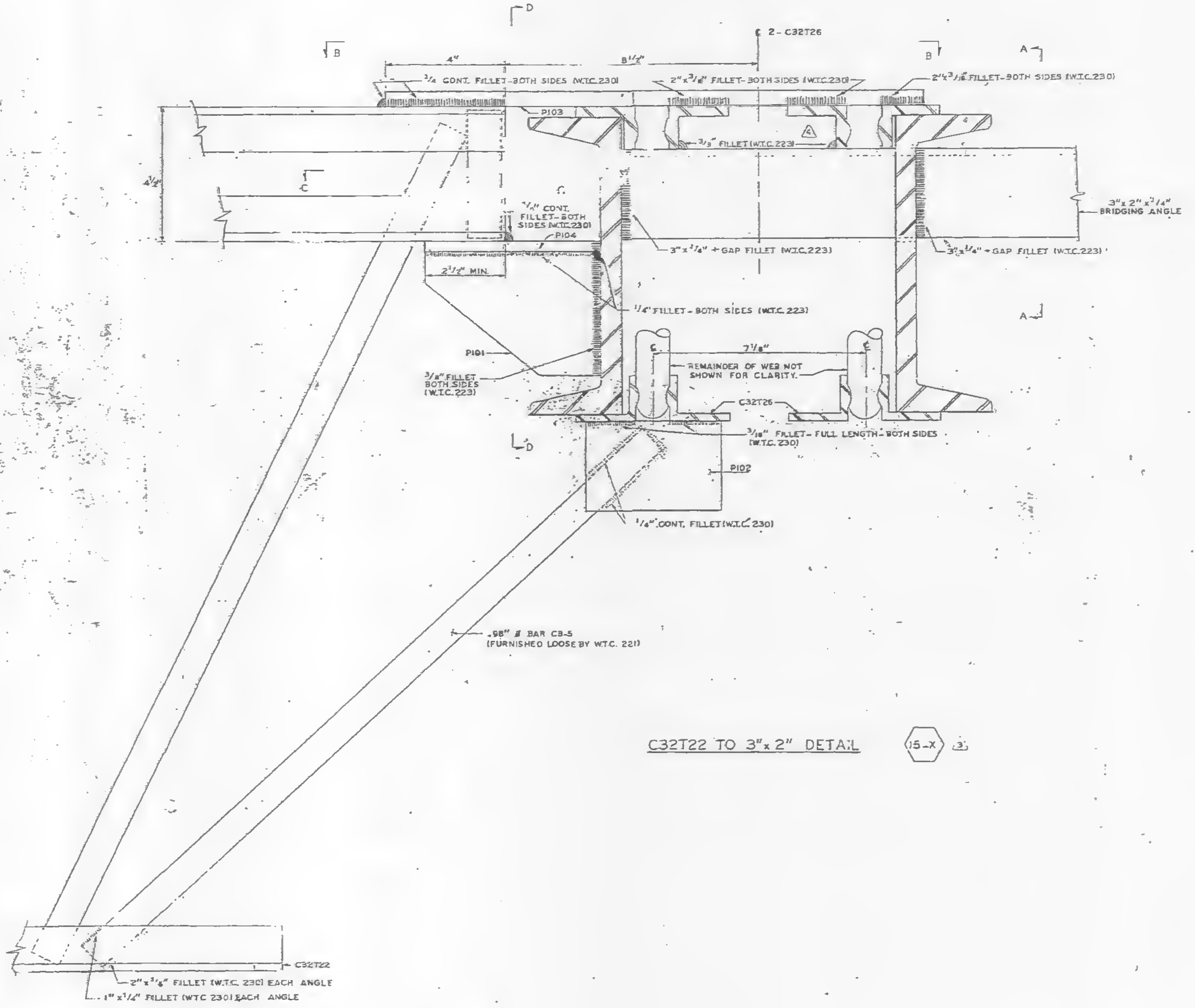
DETAIL "A"

NO.	DATE	REVISION	BY
6	3-5-69	AS NOTED	G.D.C.
5	2-25-69	R. P103 SIZE	G.D.C.
4	2-5-69	AS NOTED	G.D.C.
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

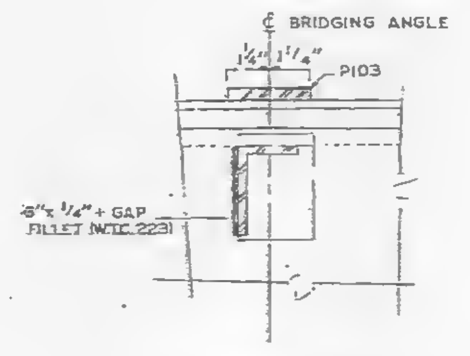
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3"x 2' BRIDGING ANGLE, DETAIL 15-X 3
WORLD TRADE CENTER TOWERS A & B

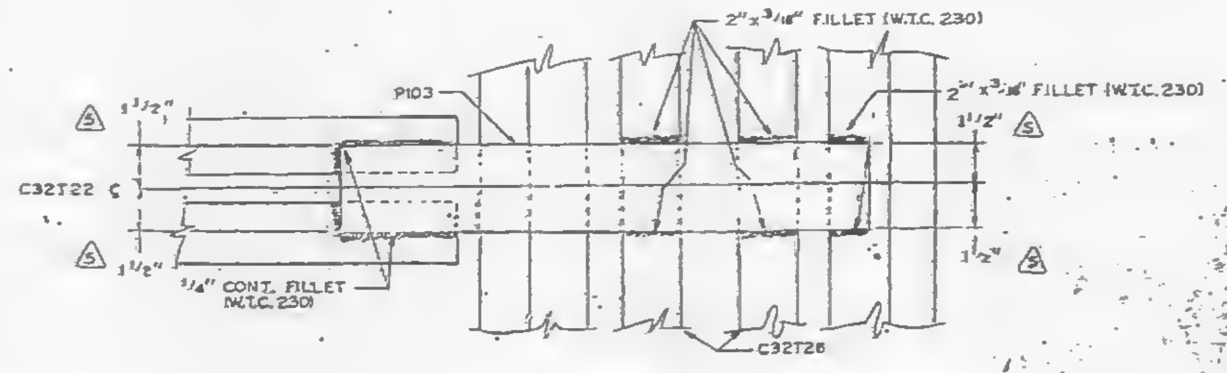
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 3/13/69
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
DETAILED BY LACLEDE STEEL CO. AT GARY WEBER
DESIGN DRAWING NO
DRAWN BY: gdc DATE OCT. 4, 1968
CHECKED BY: T.M. CHURA DATE OCT. 4, 1968
FABRICATION CONT. NO. W.T.C. 221
PLATE
IN CHARGE OF PROD. DEV.
SHEET NO CD 210


D
B
℄ 2-C32T26
B
A
4"
8 1/2"
3/4 CONT. FILLET-BOTH SIDES (W.T.C. 230)
2"x3/16" FILLET-BOTH SIDES (W.T.C. 230)
2"x3/16" FILLET-BOTH SIDES (W.T.C. 230)
P103
3/8" FILLET (W.T.C. 223)
4 1/2"
C
1/4" CONT. FILLET-BOTH SIDES (W.T.C. 230)
P104
3"x2"x1/4" BRIDGING ANGLE
3"x1/4" + GAP FILLET (W.T.C. 223)
3"x1/4" + GAP FILLET (W.T.C. 223)
2 1/2" MIN.
1/4" FILLET-BOTH SIDES (W.T.C. 223)
A
7 1/8"
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
P101
3/8" FILLET BOTH SIDES (W.T.C. 223)
C32T26
3/16" FILLET-FULL LENGTH-BOTH SIDES (W.T.C. 230)
D
P102
1/4" CONT. FILLET (W.T.C. 230)
.98" ⌀ BAR CB-5 (FURNISHED LOOSE BY W.T.C. 221)
C32T22
2"x3/16" FILLET (W.T.C. 230) EACH ANGLE
1"x1/4" FILLET (WTC 230) EACH ANGLE

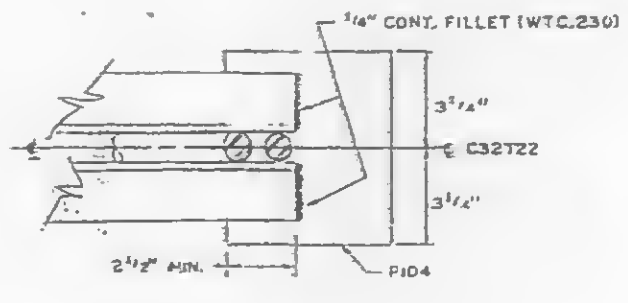
C32T22 TO 3"x 2" DETAIL (15-X) 3



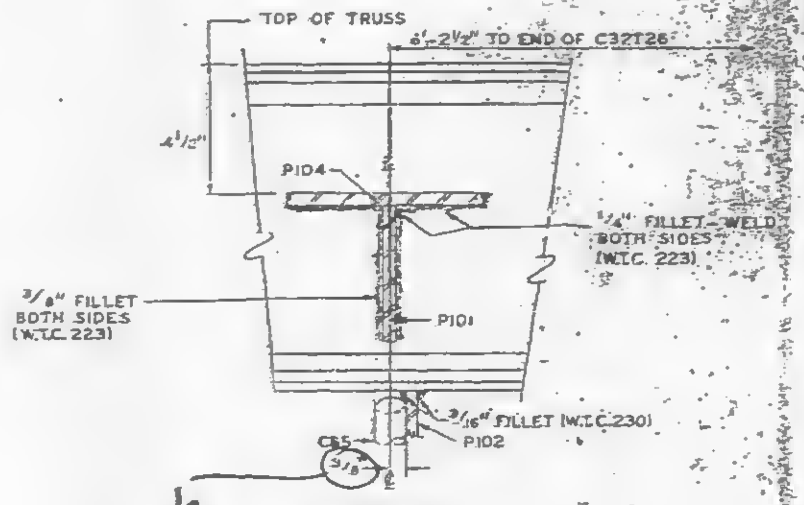
SECTION A-A


2"x3/16" FILLET (W.T.C. 230)
P103
2"x3/16" FILLET (W.T.C. 230)
1 1/2" 5
C32T22 ℄
1 1/2" 5
1 1/2" 5
1 1/2" 5
1/4" CONT. FILLET (W.T.C. 230)
C32T26

SECTION B-B



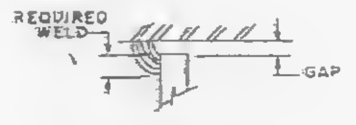
SECTION C-C


TOP OF TRUSS
6'-2 1/2" TO END OF C32T26
4 1/2"
P104
1/4" FILLET-WELD BOTH SIDES (W.T.C. 223)
3/8" FILLET BOTH SIDES (W.T.C. 223)
P101
3/16" FILLET (W.T.C. 230)
P102
CB5
3/8
1/2

SECTION D-D

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.



DETAIL "A"

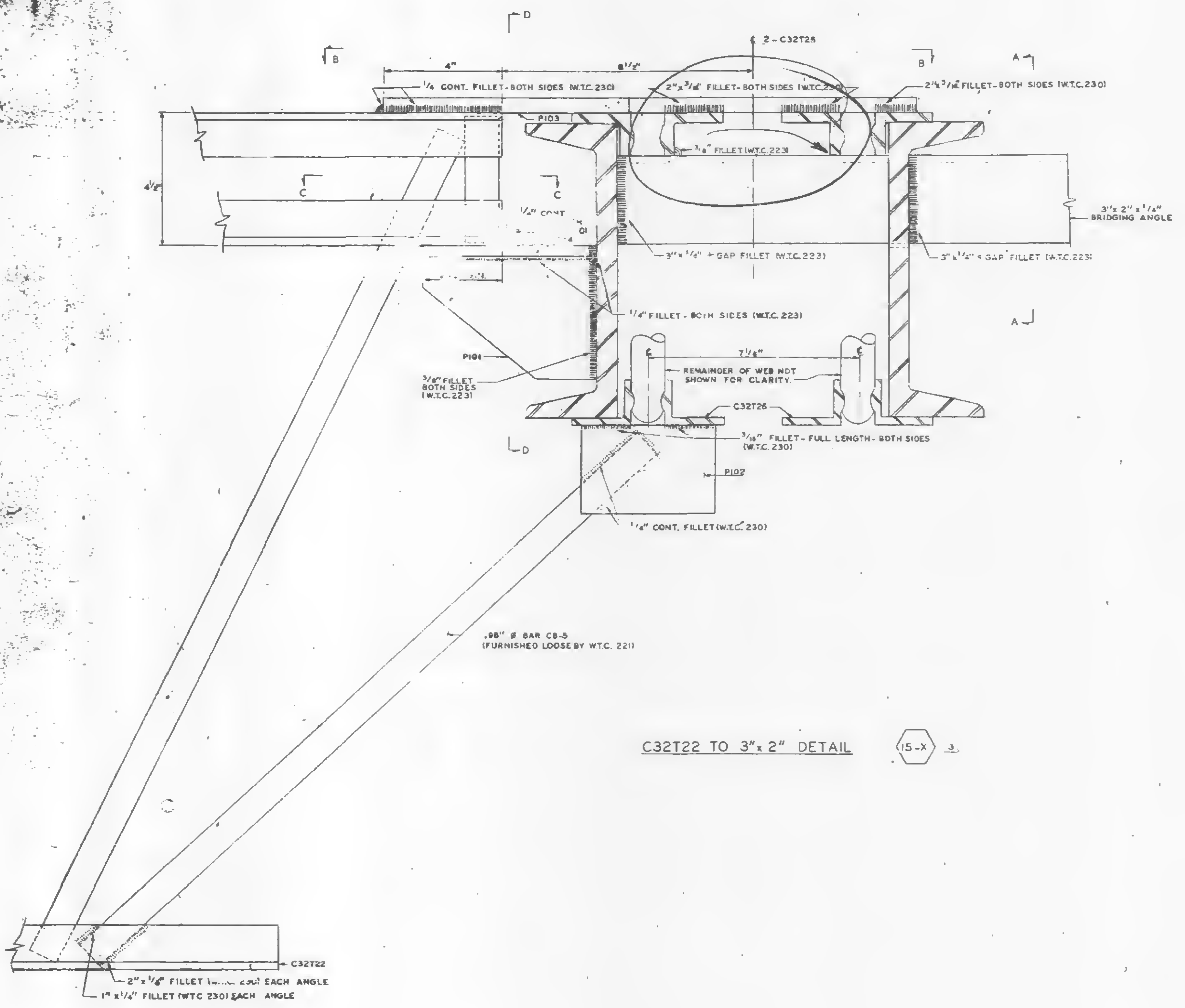
SKILLING-HELLE
CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
X
Date 2/28/69 By SK

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

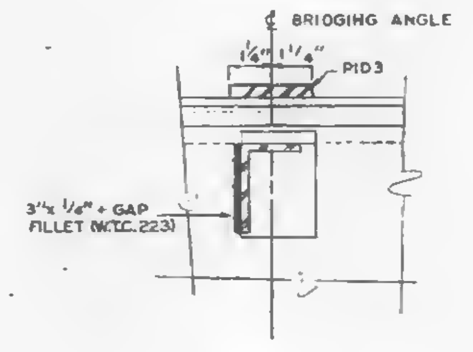
C32T22 TO 3"x 2" BRIDGING ANGLE, DETAIL 15-X 3
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE
DRAWN BY: gdc DATE OCT. 4, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE OCT. 4, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
LACLEDE STEEL CO.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 210

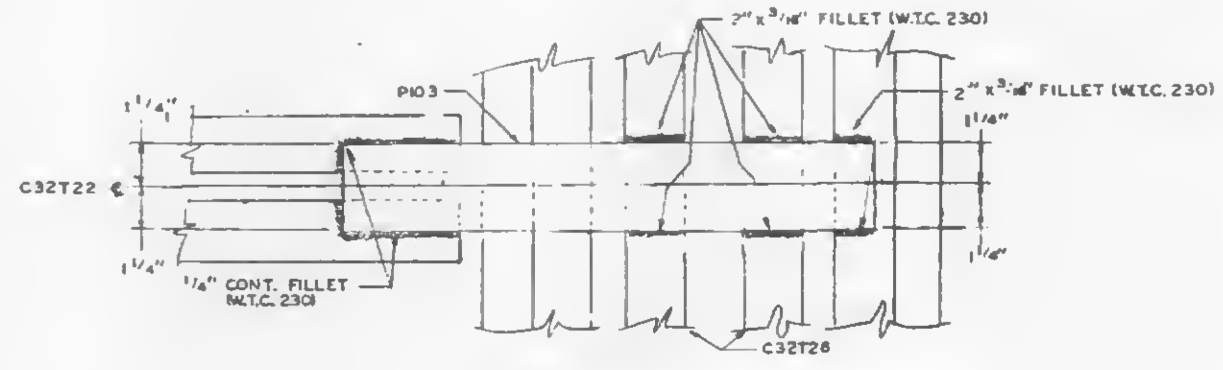
NO.	DATE	REVISION	BY
5	2-25-69	P103 SIZE	G.D.C.
4	2-5-69	AS NOTED	G.D.C.
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.


D
B
B
A
A
C
C
D
℄ 2 - C32T25
4"
8 1/2"
1/4 CONT. FILLET-BOTH SIDES (W.T.C. 230)
2"x 3/8" FILLET-BOTH SIDES (W.T.C. 230)
2 1/2"x 3/16" FILLET-BOTH SIDES (W.T.C. 230)
P103
3/8" FILLET (W.T.C. 223)
4 1/2"
1/2" CONT
3"x 2" x 1/4" BRIDGING ANGLE
3"x 1/4" + GAP FILLET (W.T.C. 223)
3"x 1 1/4" + GAP FILLET (W.T.C. 223)
1/4" FILLET - BOTH SIDES (W.T.C. 223)
P101
3/8" FILLET BOTH SIDES (W.T.C. 223)
7 1/8"
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
C32T26
3/16" FILLET - FULL LENGTH - BOTH SIDES (W.T.C. 230)
P102
1/4" CONT. FILLET (W.T.C. 230)
.98" ⌀ BAR CB-5 (FURNISHED LOOSE BY W.T.C. 221)
C32T22
2"x 1/8" FILLET (W.T.C. 230) EACH ANGLE
1"x 1/4" FILLET (WTC 230) EACH ANGLE

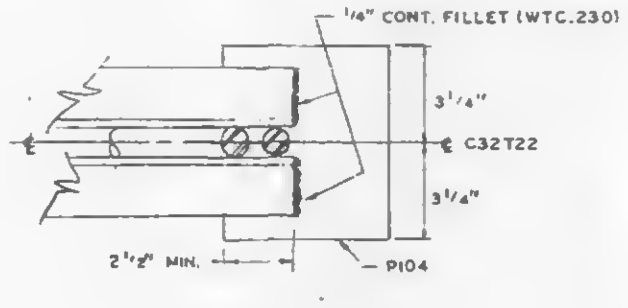
C32T22 TO 3"x 2" DETAIL (15-X) 3



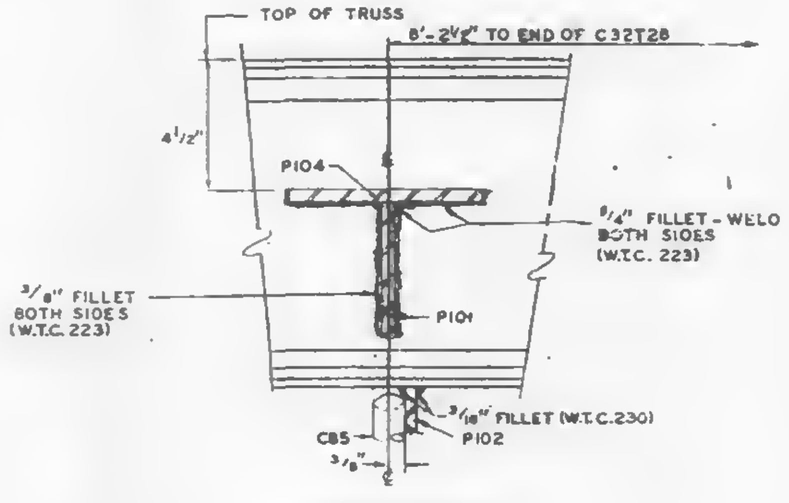
SECTION A-A


2"x 3/16" FILLET (W.T.C. 230)
2"x 3/16" FILLET (W.T.C. 230)
P103
1 1/4"
C32T22 ℄
1 1/4"
1/4" CONT. FILLET (W.T.C. 230)
1 1/4"
1 1/4"
C32T26

SECTION B-B



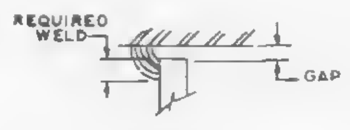
SECTION C-C


TOP OF TRUSS
8'-2 1/2" TO END OF C32T28
4 1/2"
P104
3/4" FILLET - WELD BOTH SIDES (W.T.C. 223)
3/8" FILLET BOTH SIDES (W.T.C. 223)
P101
3/16" FILLET (W.T.C. 230)
CB5
3/8"
P102

SECTION D-D

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.



DETAIL "A"

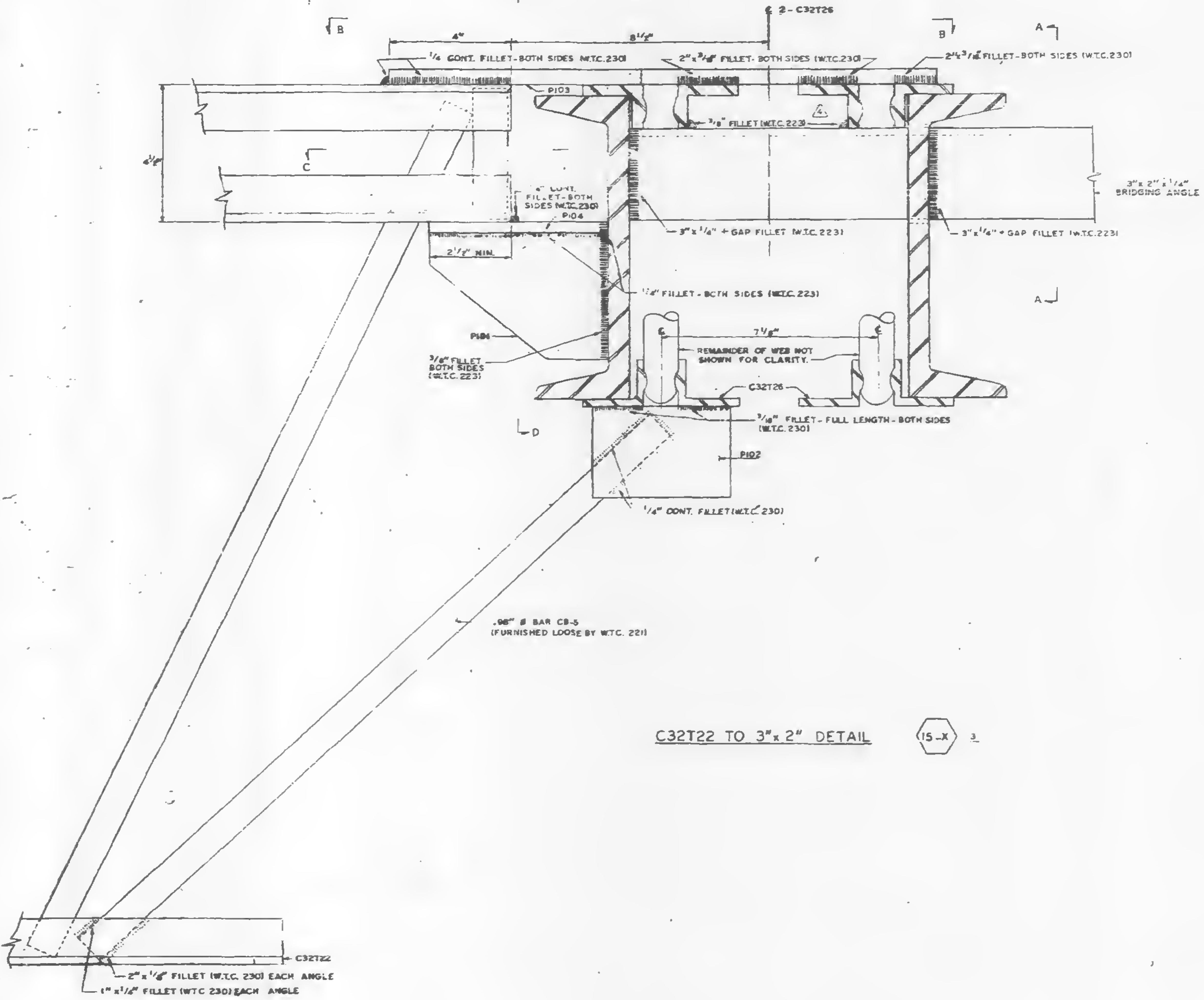
SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
Date 1/30/69 By SK

NO.	DATE	REVISION	BY
3	1-13-68	AS NOTED	G.O.C.
2	12-27-68	AS NOTED	G.O.C.
1	10-17-68	GENERAL	G.O.C.

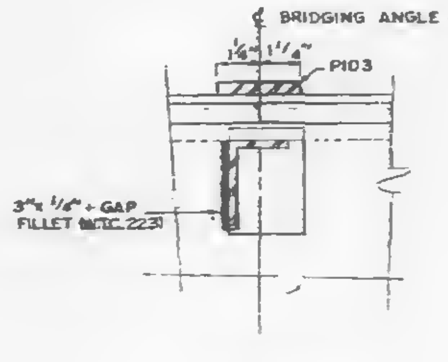
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3"x 2" BRIDGING ANGLE, DETAIL 15-X 3
WORLD TRADE CENTER TOWERS A & B

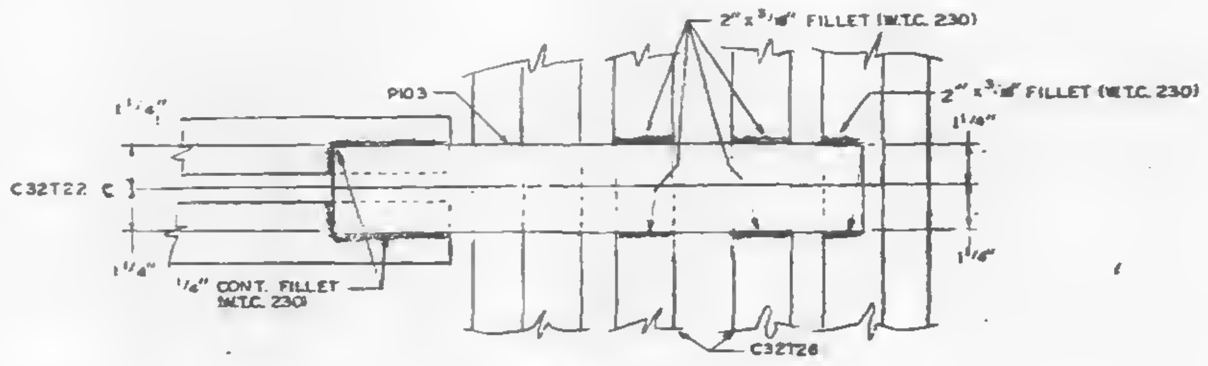
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE
DRAWN BY: gdc
DATE OCT. 4, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY T.H.CHURA
DATE OCT. 4, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 210


D
B
℄ 2-C32T26
B
A
4"
8 1/2"
1/4 CONT. FILLET-BOTH SIDES W.T.C.230
2" x 3/8" FILLET-BOTH SIDES (W.T.C.230)
2 1/2 x 3/16 FILLET-BOTH SIDES (W.T.C.230)
P103
3/8" FILLET (W.T.C. 223)
4
4 1/2"
C
4" CONT. FILLET-BOTH SIDES (W.T.C.230)
P104
3" x 2" x 1/4" BRIDGING ANGLE
3" x 1/4" + GAP FILLET (W.T.C. 223)
3" x 1/4" + GAP FILLET (W.T.C. 223)
2 1/2" MIN.
1/4" FILLET-BOTH SIDES (W.T.C. 223)
A
P104
3/8" FILLET BOTH SIDES (W.T.C. 223)
7 1/2"
℄
℄
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
C32T26
3/16" FILLET-FULL LENGTH-BOTH SIDES (W.T.C. 230)
D
P102
1/4" CONT. FILLET (W.T.C. 230)
.98" ∅ BAR CB-5 (FURNISHED LOOSE BY W.T.C. 221)
C32T22
2" x 1/8" FILLET (W.T.C. 230) EACH ANGLE
1" x 1/4" FILLET (WTC 230) EACH ANGLE

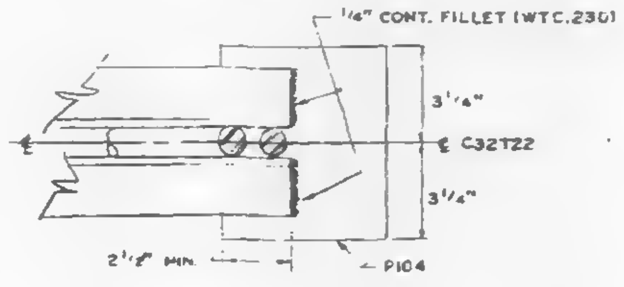
C32T22 TO 3"x 2" DETAIL (15-X) 3



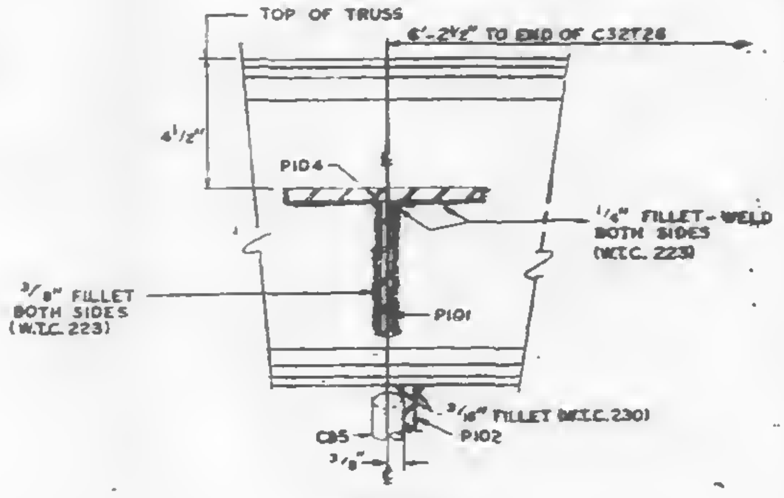
SECTION A-A


2" x 3/8" FILLET (W.T.C. 230)
2" x 3/8" FILLET (W.T.C. 230)
P103
1 1/4"
C32T22 ℄
1 1/4"
1 1/4"
1/4" CONT. FILLET W.T.C. 230
1 1/8"
C32T26

SECTION B-B



SECTION C-C

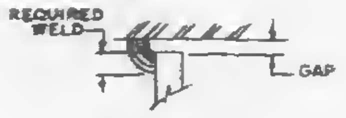

TOP OF TRUSS
6'-2 1/2" TO END OF C32T26
4 1/2"
P104
1/4" FILLET-WELD BOTH SIDES (W.T.C. 223)
3/8" FILLET BOTH SIDES (W.T.C. 223)
P101
3/16" FILLET (W.T.C. 230)
CB5
P102

SECTION D-D

VOID

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL +GAP FILLET WELDS.



DETAIL "A"

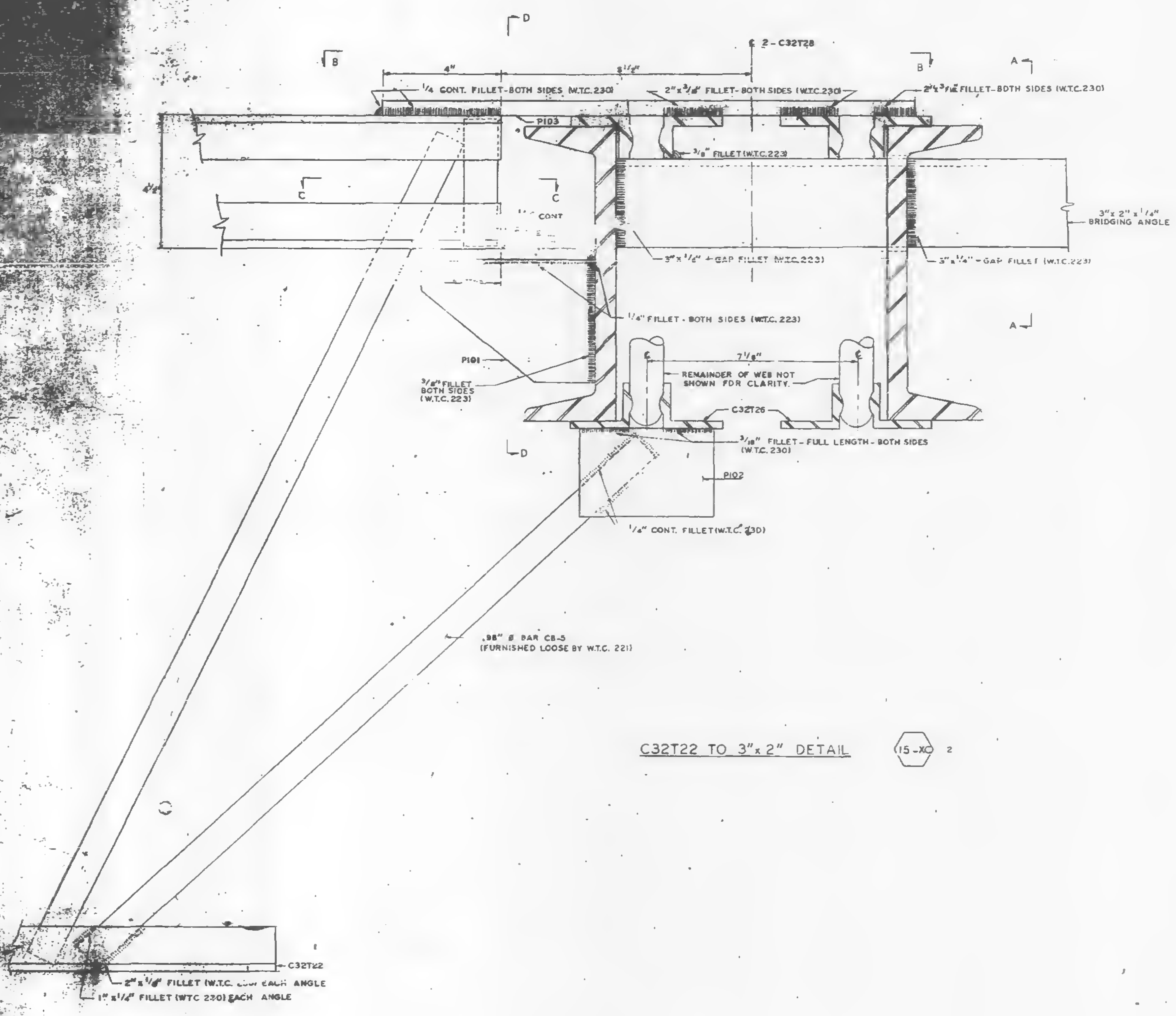
NO.	DATE	REVISION	BY
4	2-5-69	AS NOTED	G.D.C.
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

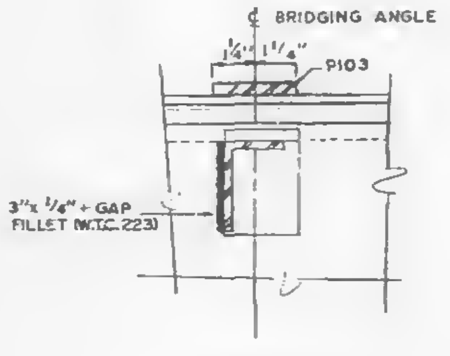
C32T22 TO 3"x 2" BRIDGING ANGLE, DETAIL 15-X 3
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

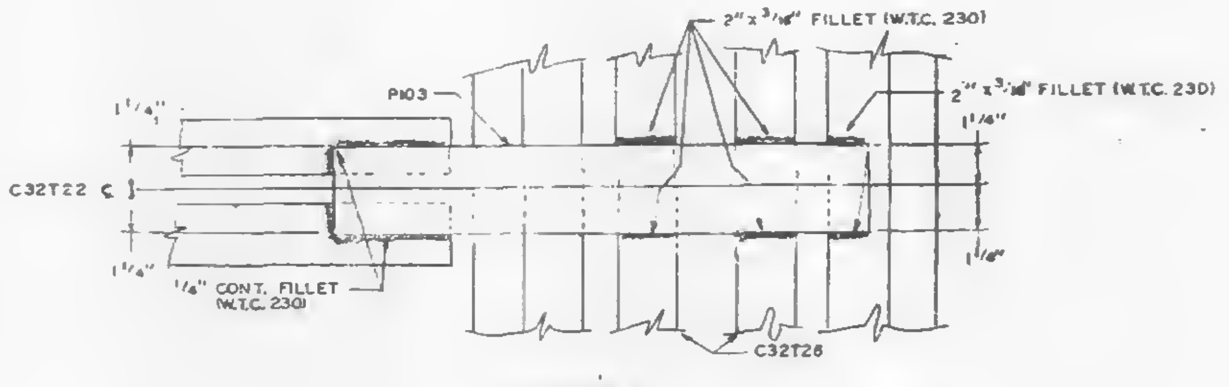
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: gdc DATE OCT. 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 4, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL - J. DETAILED FOR A. CARL [illegible]		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 210


D
B
℄ 2 - C32T28
B
A
4"
8 1/2"
1/4 CONT. FILLET-BOTH SIDES (W.T.C. 230)
2"x 3/16" FILLET-BOTH SIDES (W.T.C. 230)
2"x 3/16" FILLET-BOTH SIDES (W.T.C. 230)
P103
3/8" FILLET (W.T.C. 223)
4 1/2"
C
C
CONT
3"x 2" x 1/4" BRIDGING ANGLE
3"x 1/4" + GAP FILLET (W.T.C. 223)
3"x 1/4" + GAP FILLET (W.T.C. 223)
1/4" FILLET - BOTH SIDES (W.T.C. 223)
A
P101
3/8" FILLET BOTH SIDES (W.T.C. 223)
7 1/8"
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
C32T26
3/16" FILLET - FULL LENGTH - BOTH SIDES (W.T.C. 230)
D
P102
1/4" CONT. FILLET (W.T.C. 230)
.98" ø BAR C8-5 (FURNISHED LOOSE BY W.T.C. 221)
C32T22
2"x 1/4" FILLET (W.T.C. 230) EACH ANGLE
1"x 1/4" FILLET (WTC 230) EACH ANGLE

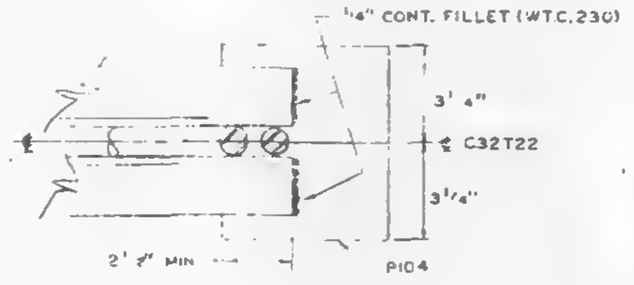
C32T22 TO 3"x 2" DETAIL (15-XC) 2



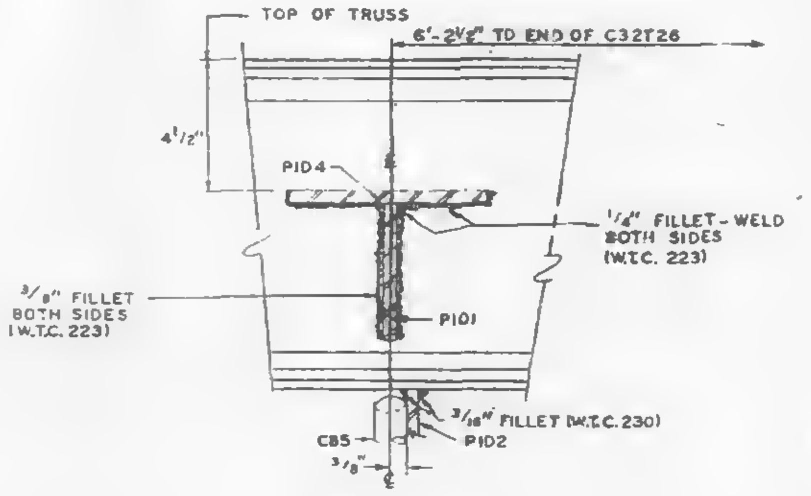
SECTION A-A


2"x 3/16" FILLET (W.T.C. 230)
P103
2"x 3/16" FILLET (W.T.C. 230)
1 1/4"
1 1/4"
C32T22 ℄
1 1/4"
1/4" CONT. FILLET (W.T.C. 230)
1 1/4"
C32T26

SECTION B-B



SECTION C-C

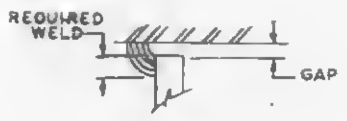

TOP OF TRUSS
6'-2 1/2" TO END OF C32T26
4 1/2"
P104
1/4" FILLET-WELD BOTH SIDES (W.T.C. 223)
3/8" FILLET BOTH SIDES (W.T.C. 223)
P101
3/16" FILLET (W.T.C. 230)
C85
P102
3/8"

SECTION D-D

VOID

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.



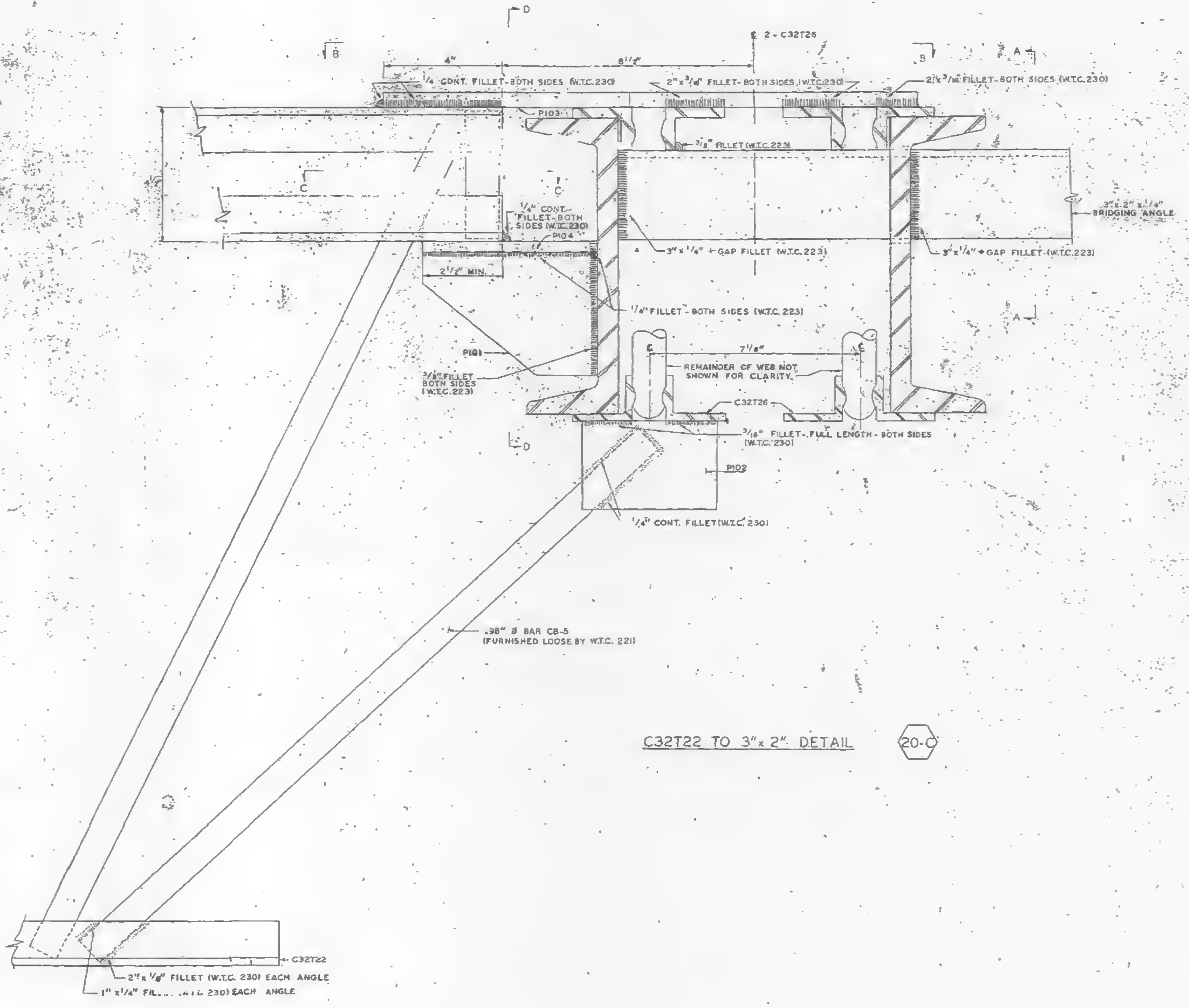
DETAIL "A"

NO.	DATE	REVISION	BY
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

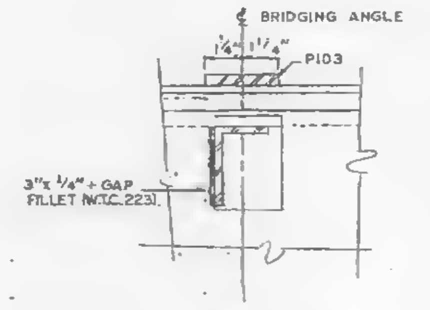
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3"x 2" BRIDGING ANGLE . DETAIL 15-XC 2
WORLD TRADE CENTER TOWERS A & B

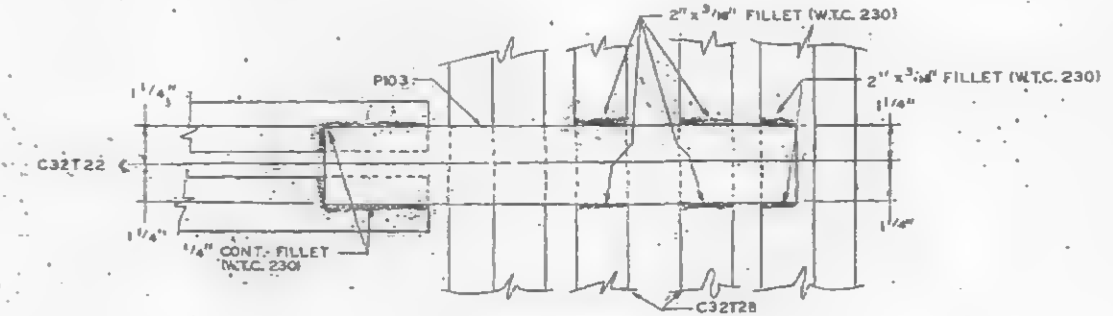
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE
DRAWN BY: gdc
DATE OCT. 4, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA
DATE OCT. 4, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 210


D
B
℄ 2-C32T26
B
A
4"
8½"
¼ CONT. FILLET-BOTH SIDES (W.T.C.230)
2"x 3/16" FILLET-BOTH SIDES (W.T.C.230)
2½x 3/16 FILLET-BOTH SIDES (W.T.C.230)
P103
3/8" FILLET (W.T.C.223)
C
C
¼" CONT. FILLET-BOTH SIDES (W.T.C.230)
P104
3"x 2" x ¼" BRIDGING ANGLE
2½" MIN.
3"x ¼" + GAP FILLET (W.T.C.223)
3"x ¼" + GAP FILLET (W.T.C.223)
¼" FILLET-BOTH SIDES (W.T.C.223)
A
P101
3/8" FILLET BOTH SIDES (W.T.C.223)
7⅛"
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
C32T26
3/16" FILLET-FULL LENGTH-BOTH SIDES (W.T.C.230)
D
P102
¼" CONT. FILLET (W.T.C. 230)
.98" Ø BAR CB-5 (FURNISHED LOOSE BY W.T.C. 221)
C32T22
2"x ⅛" FILLET (W.T.C. 230) EACH ANGLE
1"x ¼" FIL... W.T.C. 230) EACH ANGLE

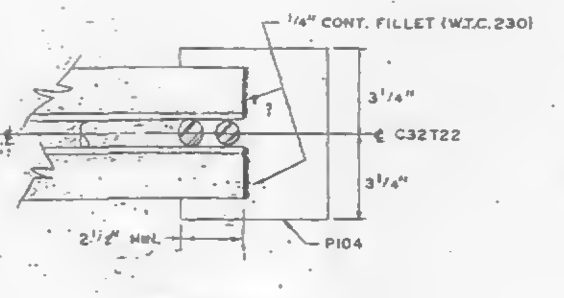
C32T22 TO 3"x 2" DETAIL 20-C



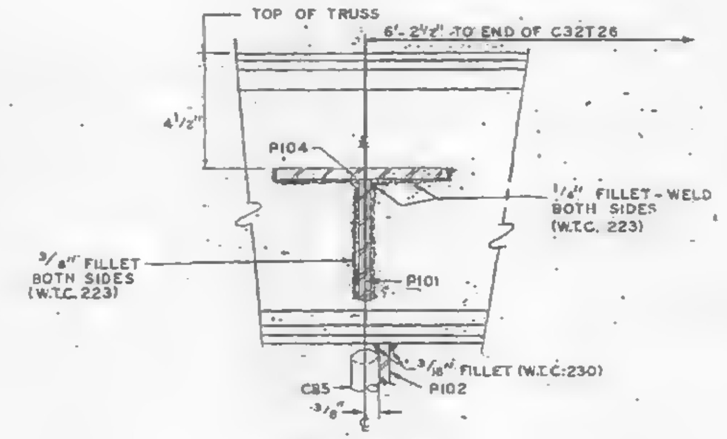
SECTION A-A


2"x 3/16" FILLET (W.T.C. 230)
2"x 3/16" FILLET (W.T.C. 230)
P103
1¼"
C32T22
1¼"
¼" CONT. FILLET (W.T.C. 230)
1¼"
1¼"
C32T28

SECTION B-B

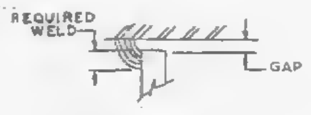


SECTION C-C



SECTION D-D

NOTES:
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.



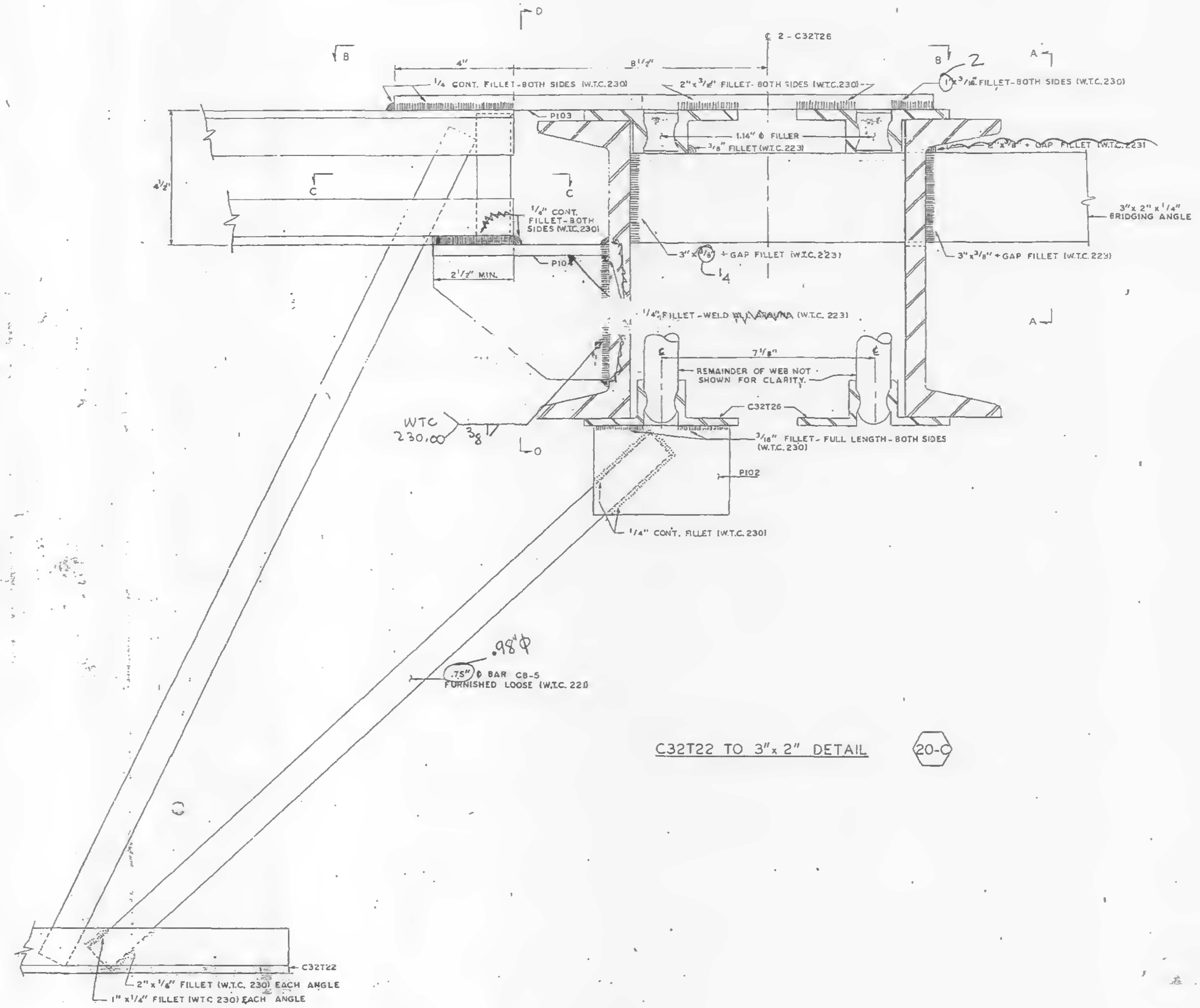
DETAIL "A"

NO.	DATE	REVISION	BY
1	10-17-68	GENERAL	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

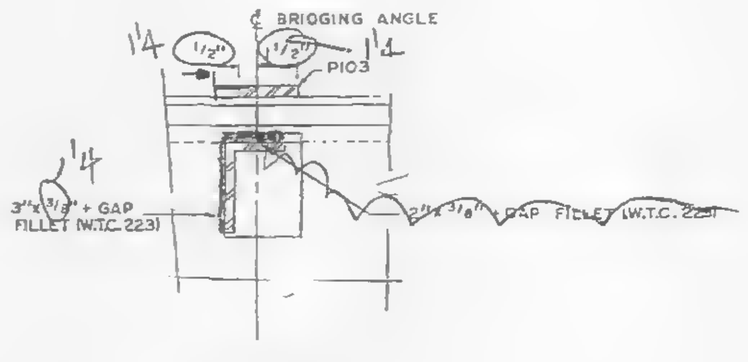
C32T22 TO 3"x 2" BRIDGING ANGLE, DETAIL 20-C
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL . COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 10/23/68
DRAWN BY: gdc DATE OCT. 4, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE OCT. 4, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: CARL-WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 210

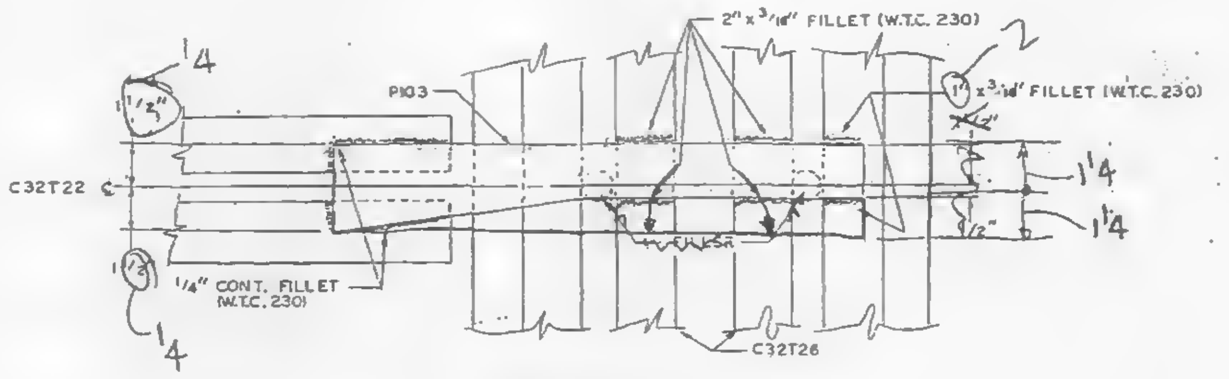

D
B
¢ 2 - C32T26
4"
8 1/2"
B
2
A
1/4 CONT. FILLET-BOTH SIDES (W.T.C. 230)
2" x 3/16" FILLET- BOTH SIDES (W.T.C. 230)
1" x 3/16" FILLET-BOTH SIDES (W.T.C. 230)
P103
1.14" Φ FILLER
3/8" FILLET (W.T.C. 223)
2" x 3/8" + GAP FILLET (W.T.C. 223)
4 1/2"
C
C
1/4" CONT. FILLET-BOTH SIDES (W.T.C. 230)
3" x 2" x 1/4" BRIDGING ANGLE
P104
2 1/2" MIN.
3" x 3/8" + GAP FILLET (W.T.C. 223)
1 4
3" x 3/8" + GAP FILLET (W.T.C. 223)
1/4" FILLET-WELD ALL AROUND (W.T.C. 223)
A
7 1/8"
¢
¢
REMAINDER OF WEB NOT SHOWN FOR CLARITY.
C32T26
WTC 230.00
3 8
D
3/16" FILLET- FULL LENGTH- BOTH SIDES (W.T.C. 230)
P102
1/4" CONT. FILLET (W.T.C. 230)
.98" Φ
.75" Φ BAR C8-5 FURNISHED LOOSE (W.T.C. 221)
C32T22
2" x 3/16" FILLET (W.T.C. 230) EACH ANGLE
1" x 1/4" FILLET (WTC 230) EACH ANGLE

C32T22 TO 3"x 2" DETAIL

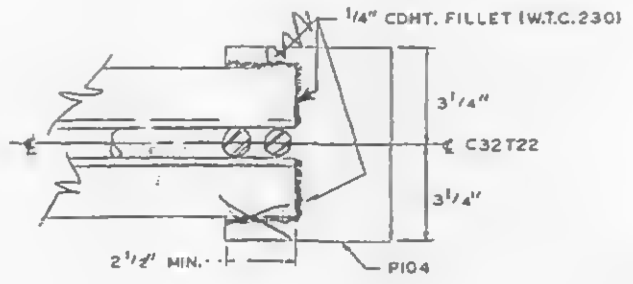
20-C


¢ BRIDGING ANGLE
1 4
1/2"
1/2"
1 4
P103
1 4
3" x 3/8" + GAP FILLET (W.T.C. 223)
2" x 3/8" + GAP FILLET (W.T.C. 223)

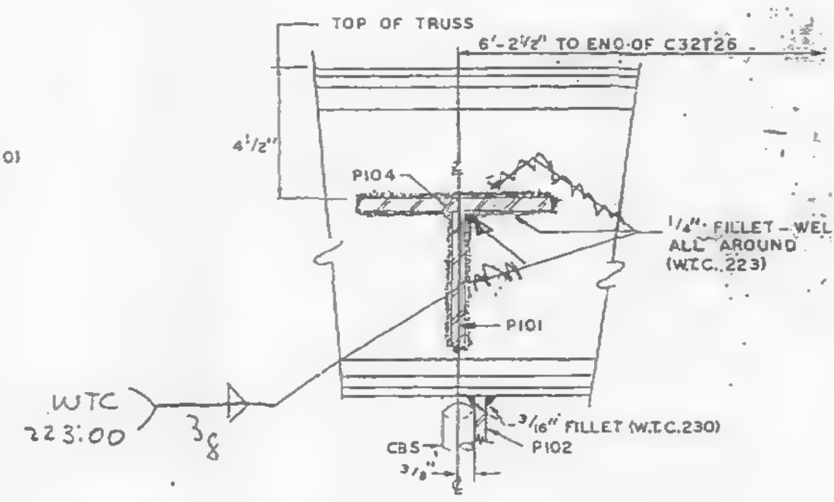
SECTION A-A


2" x 3/16" FILLET (W.T.C. 230)
1 4
1 1/2"
P103
2
1" x 3/16" FILLET (W.T.C. 230)
C32T22 ¢
1 4
1/2"
1 4
1 1/2"
1/4" CONT. FILLET (W.T.C. 230)
1 4
C32T26

SECTION B-B



SECTION C-C


TOP OF TRUSS
6'-2 1/2" TO END OF C32T26
4 1/2"
P104
1/4" FILLET-WELD ALL AROUND (W.T.C. 223)
P101
WTC 223.00
3 8
3/16" FILLET (W.T.C. 230)
CB5
P102
3/8"

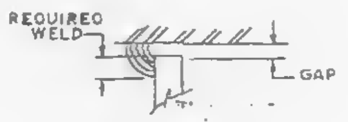
SECTION D-D

SKILLING HELLE
CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
☒ APPROVED AS NOTED
10/15/68 SK

RECEIVED

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.



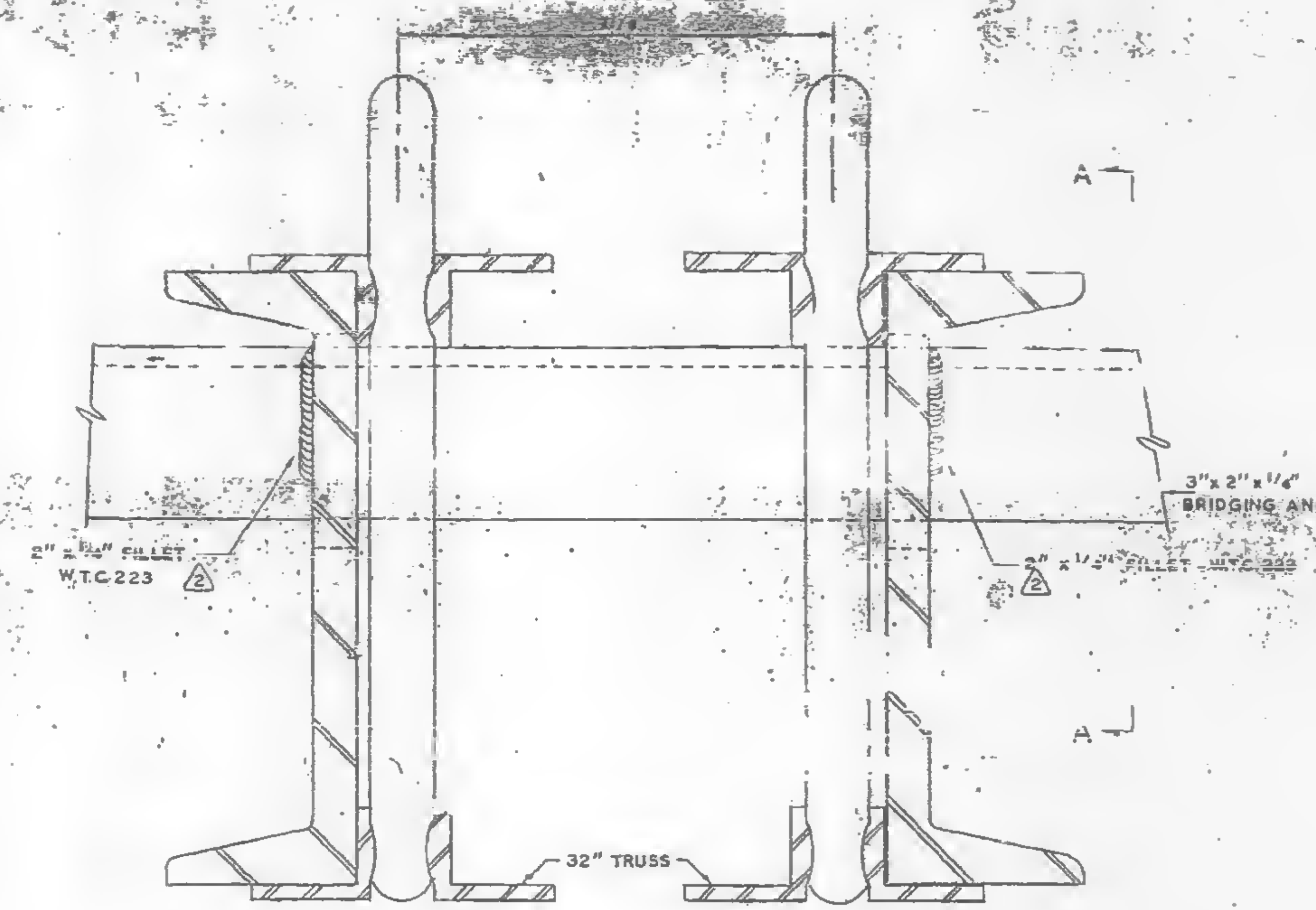
DETAIL "A"

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3"x 2" BRIDGING ANGLE, DETAIL 20-C
WORLD TRADE CENTER TOWERS A & B

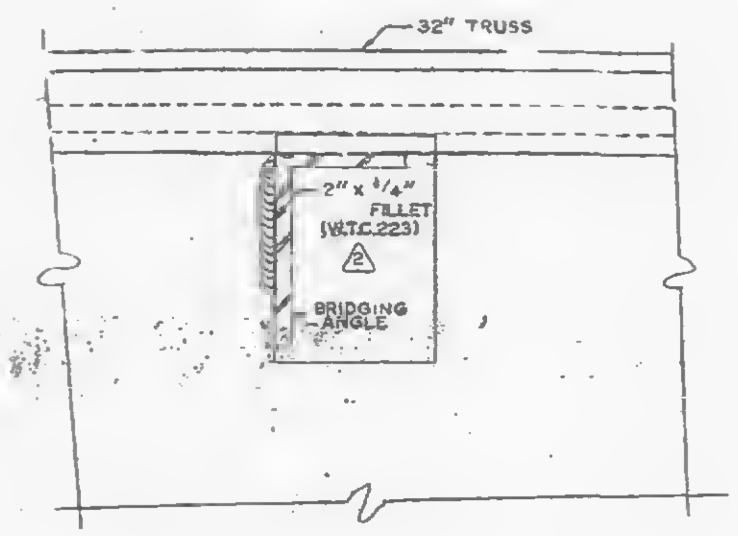
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A DATE
DRAWN BY gdc
DATE OCT. 4, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY T.M CHURA
DATE OCT. 4, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO W.T.C. 221
SHEET NO. CD 210

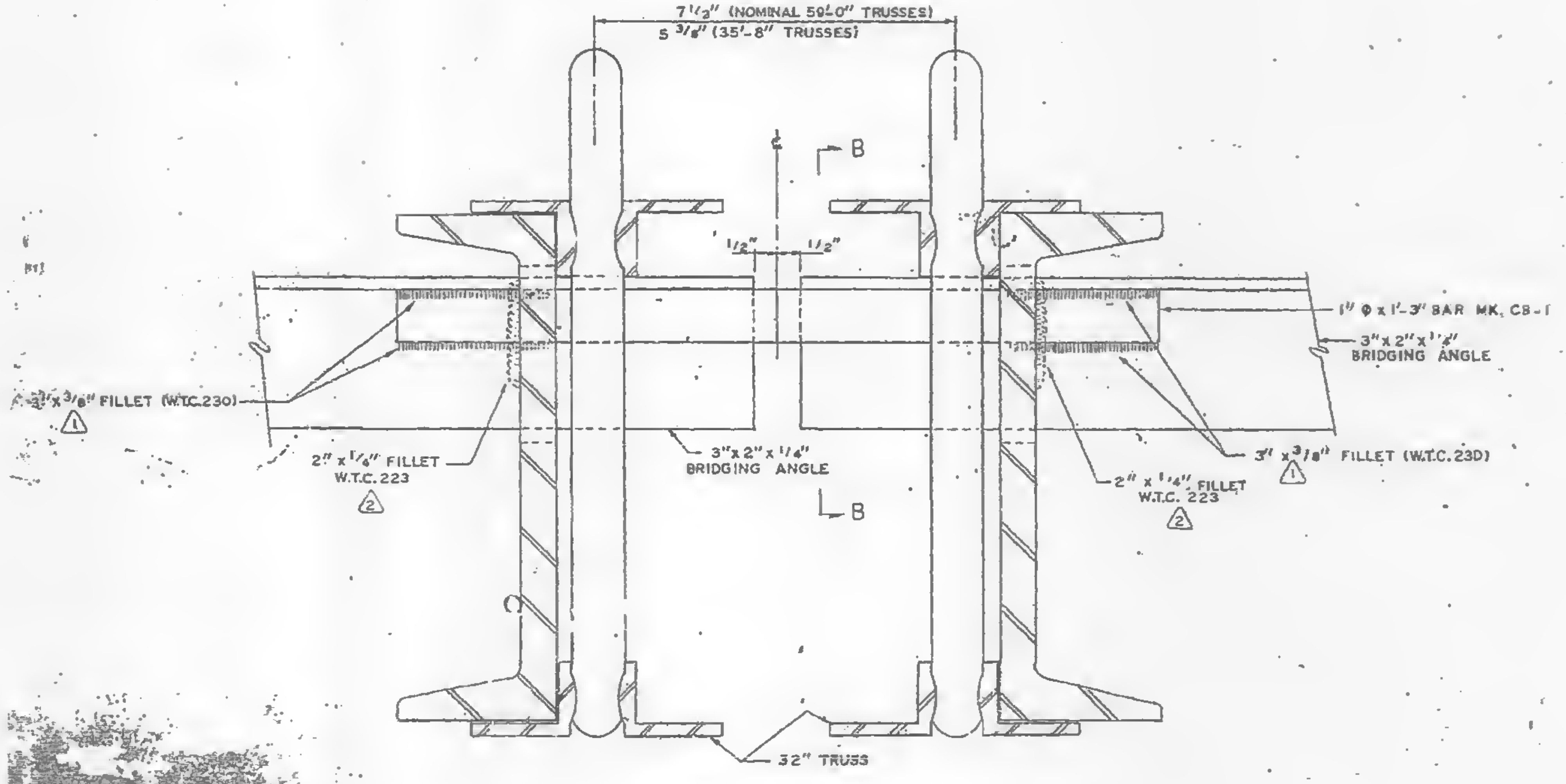

A
A
3"x 2"x 1/4" BRIDGING ANGLE
2" x 1/4" FILLET W.T.C.223
2
2" x 1/4" FILLET W.T.C.223
2
32" TRUSS

INTERIOR BRIDGING ANGLE CONNECTION (1-X)

PANELS: A2, B2, BR2, C2, CR2, D2
DR2, E2, ER2, F2 & FR2

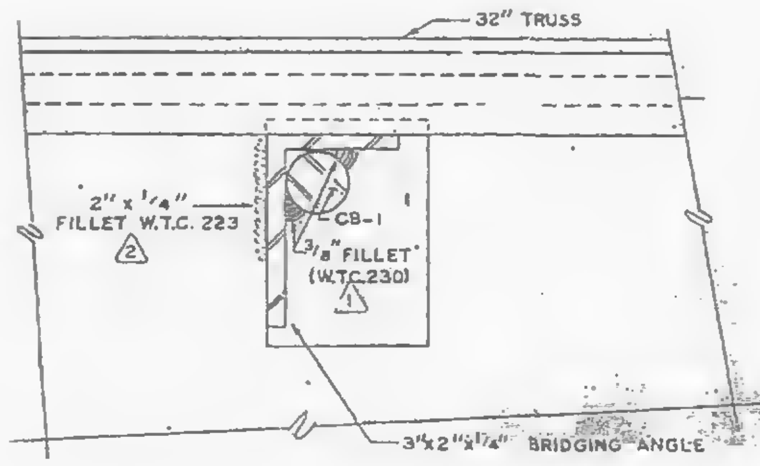


SECTION A-A


7 1/2" (NOMINAL 59'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
B
B
1/2"
1/2"
1" φ x 1'-3" BAR MK. CB-1
3"x 2"x 1/4" BRIDGING ANGLE
3" x 3/8" FILLET (W.T.C.230)
1
2" x 1/4" FILLET W.T.C. 223
2
3"x 2"x 1/4" BRIDGING ANGLE
2" x 1/4" FILLET W.T.C. 223
2
3" x 3/8" FILLET (W.T.C. 230)
1
32" TRUSS

PANEL JOINT BRIDGING ANGLE CONNECTION (2-X)

PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2, FR2, G2,
GR2, H7, HR2 & J2.



SECTION B-B

LIST OF FLOOR CONNECTION INDENTIFICATIONS FOR FLOORS 2 , 59, & 92
TOWERS A & B

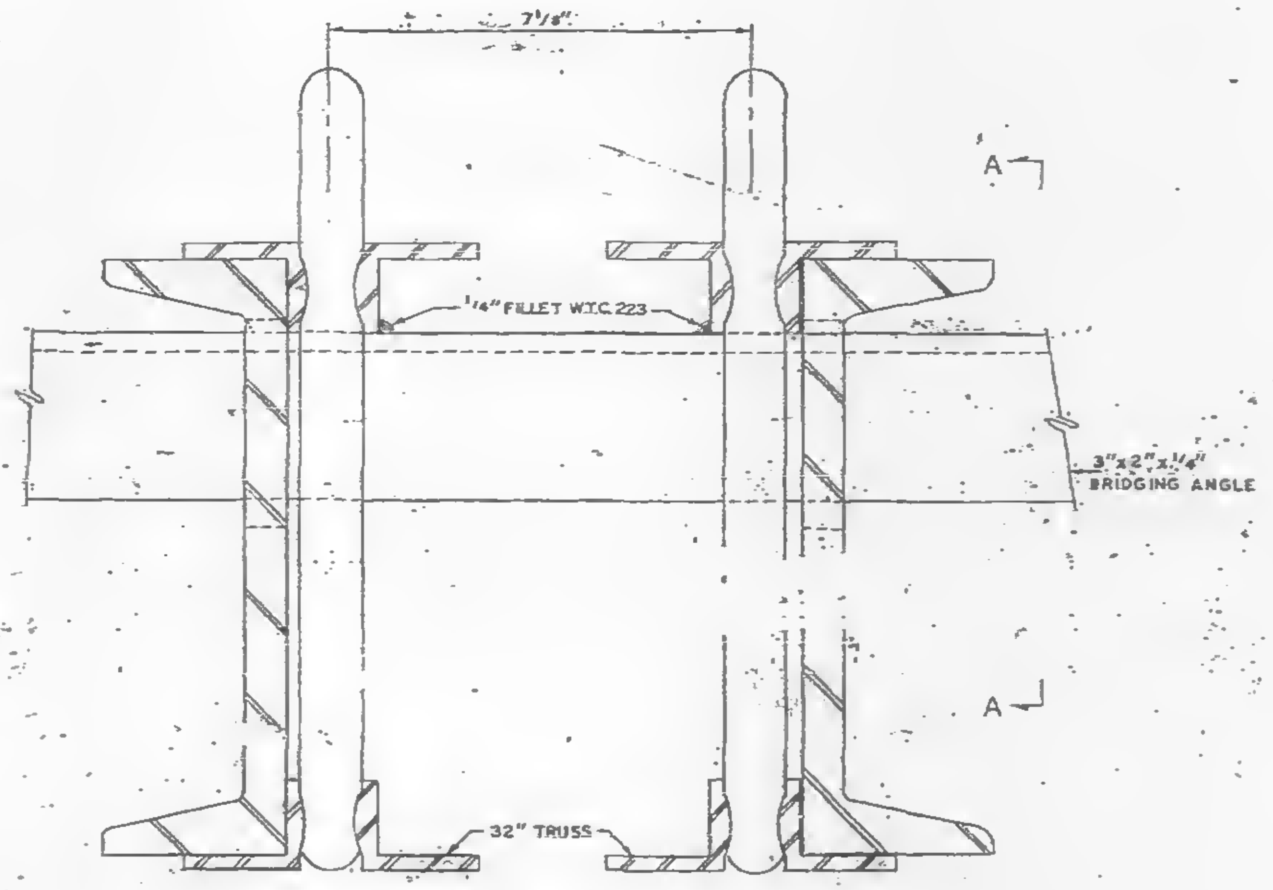
Connection Designation		Drawing No.
1-X	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 and FR2	CD 211
1-XA	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels G2, GR2, H7, HR2 and J2	CD [illegible]
1-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Point.	CD 220
2-X	Standard Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss at Panel Joints	CD 211
2-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 2-X, 13XC, 14XC and 15XC)	CD 226
3-XA	Connection of A35 and AA21 with a 32T22 in F2 and FR2 Panels	CD 218
3-XB	Connection of AA22 and AA23 with a C32T22 in F2 and FR2 Panels	CD 217
3-XC	Connection of AA9 Bridging Angles with C32T22 in F2 and FR2 Panels	CD 223
4-X	Connection of Interior Bridging Trusses with Extended End 32" Floor Trusses in Panels A2, B2, BR2, B7, BR7, C2, CR2, D2, DR2, D7, DR7, E2 and ER2	CD 215
4-XA	Connection of Interior Bridging Trusses with C32T21 in Panels F2 and FR2	CD [illegible]
4-XCA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels A, B, BR, C and CR)	CD 220
4-XCB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels G2, GR2, H2, H7, HR7, HR2, J2)	CD 220
5-X	Connection of 24T14A Bridging Trusses with C32T22 Trusses at Interior Panel Points (Panels F2 and FR2)	CD 218
5-XC	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels D, DR, E, ER, F, FR, G and GR except 5-X, 6-X, 6-XA Connections in Panel F and FR)	CD 220
6-X	Connection of Interior Bridging Trusses 24T7C or 24T7E with C32T22	CD 219
6-XA	Connection of 24T7D Bridging Trusses with C32T22 at Interior Panel Points	CD 219
7-X	Connection of the following Bridging Trusses at Panel Joints: 24T14A to 24T[illegible]A, or 24T11B to 24T13D, 1[illegible], 16B or 16C	CD 212
7-XC	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints except Special Cases 8-XC, 9-XC, 10-XC, 11-XC	CD 220
8-XC	Connections of the following Bridging Trusses at Panel Joints: 24T[illegible] to 24T10 or 24T10C 24T[illegible]A to 24T10A or 24T10D 24T[illegible] to 24T10[illegible] or 24T10E	CD 221
9-X	Connection of 24T1[illegible] Bridging Trusses with 24T11B Bridging Truss at a Panel Joint	CD [illegible]13
9-XC	Connections of the following Bridging Trusses at Panel Joints: 24[illegible] to 24T11A, or 24[illegible]A to 2411C	CD 222
10-XC	Connections of the following Bridging Trusses at Panel Joints 24T[illegible] to [illegible] 24T[illegible]A to [illegible] 24T[illegible] to 24T7E	CD 221
11-X	Connection of the [illegible]T15A Bridging Trusses at a 24T16B or 16C at a Panel Joint	CD [illegible]14
11-XC	Connection of 24T12 Bridging Truss with the 24T10, 10A [illegible], 10D or 10E Bridging at Panel Joints ⚠2	CD 223
12-XC	Reserved	
13-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses with Double C32T16 Trusses	CD 228
14-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses Double C32T20 Trusses	CD 226
15-X	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 with a C32T22	CD 210
16-XC	Connection of 24T9 Bridging Truss at Double C32T26 Trusses with Double C32T19 Trusses	CD 227
17-XC	Connection of 24T9A Bridging Truss at Double C32T26 Trusses with Double C32T21 Trusses	CD 225
18-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T18 Trusses in Panel E and ER at Second Line of Bridging from Core End	CD 223
19-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T15 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at Second Line of Bridging from Core End	CD 223

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-X & 2-X

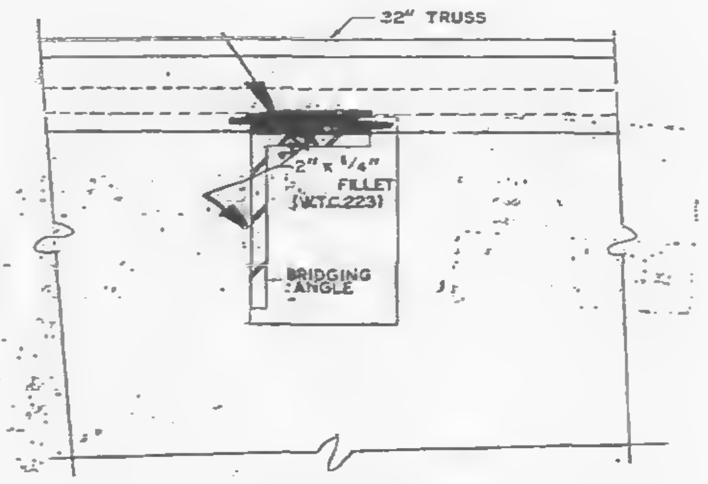
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO.:
PLATE:
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A. DATE 3/13/69
DRAWN BY: gdc DATE OCT. 8, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M. CHURA DATE OCT. 8, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
LACLEDE STEEL CO.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 211

NO.	DATE	REVISION	BY
2	3-[illegible]-69	AS NOTED	G.D.C.
1	2-5-69	AS NOTED	G.D.C.

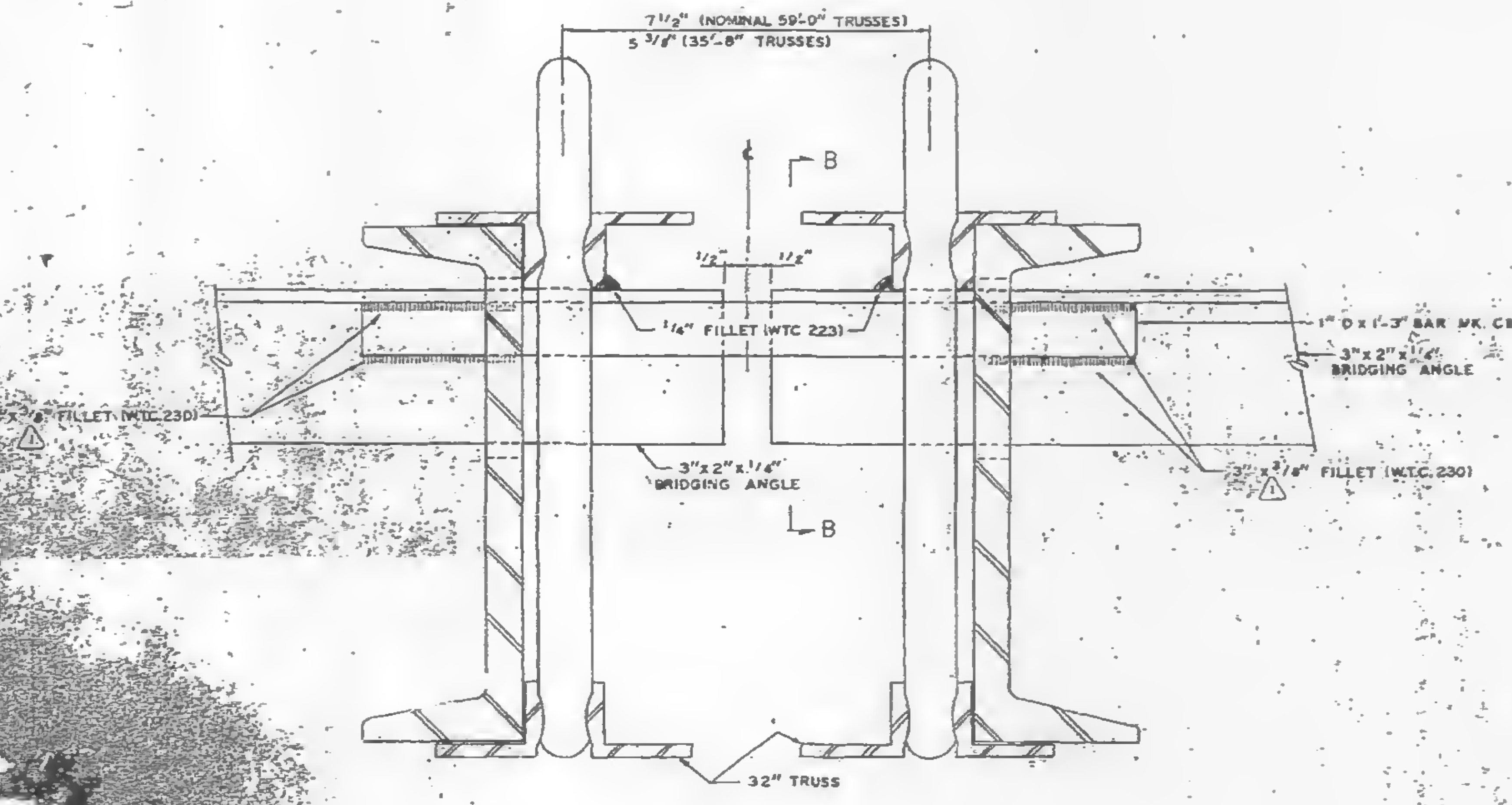


INTERIOR BRIDGING ANGLE CONNECTION ⟨1-X⟩

PANELS: A2, B2, BR2, C2, CR2, D2
DR2, E2, ER2, F2 & FR2

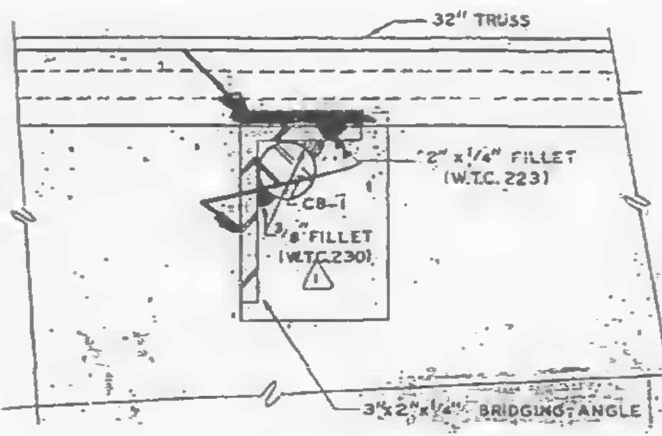


SECTION A-A


7 1/2" (NOMINAL 59'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
℄
B
B
1/2"
1/2"
1/4" FILLET (WTC 223)
1" D x 1'-3" BAR MK. CB-1
3"x2"x1/4" BRIDGING ANGLE
3"x3/8" FILLET (W.T.C. 230)
1
3"x2"x1/4" BRIDGING ANGLE
3"x3/8" FILLET (W.T.C. 230)
1
32" TRUSS

PANEL JOINT BRIDGING ANGLE CONNECTION ⟨2-X⟩

PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2, FR2, G2,
GR2, H7, HR2 & J2.



SECTION B-B

LIST OF FLOOR CONNECTION INDENTIFICATIONS FOR FLOORS 25, 59, & 92

TOWERS A & B

Connection Designation		Drawing No.
1-X	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 and FR2	CD 211
1-XA	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels G2, GR2, H7, HR2 and J2	CD 217
1-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Points	CD 220
2-X	Standard Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss at Panel Joints	CD 211
2-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 2-X, 13XC, 14XC and 15XC)	CD 220
3-XA	Connection of A35 and AA21 with a 32T22 in F2 and FR2 Panels	CD 218
3-XB	Connection of AA22 and AA23 with a C32T22 in F2 and FR2 Panels	CD 217
3-XC	Connection of AA9 Bridging Angles with C32T22 in F2 and FR2 Panels	CD 223
4-X	Connection of Interior Bridging Trusses with Extended End 32" Floor Trusses in Panels A2, B2, BR2, B7, BR7, C2, CR2, D2, DR2, D7, DR7, E2 and ER2	CD 215
4-XA	Connection of Interior Bridging Trusses with C32T21 in Panels F2 and FR2	CD 216
4-XCA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels A, B, BR, C and CR)	CD 220
4-XCB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels G2, GR2, H2, H7, HR7, HR2, J2)	CD 220
5-X	Connection of 24T14A Bridging Trusses with C32T22 Trusses at Interior Panel Points (Panels F2 and FR2)	CD 216
5-XC	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels D, DR, E, ER, F, FR, G and GR except 5-X, 6-X, 6-XA Connections in Panel F and FR)	CD 220
6-X	Connection of Interior Bridging Trusses 24T7C or 24T7E with C32T22	CD 219
6-XA	Connection of 24T7D Bridging Trusses with C32T22 at Interior Panel Points	CD 219
7-X	Connection of the following Bridging Trusses at Panel Joints: 24T14A to 2415A, or 24T11B to 24T13D, 13, 16B or 16C	CD 212
7-XC	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints except Special Cases 8-XC, 9-XC, 10-XC, 11-XC.	CD 220
8-XC	Connections of the following Bridging Trusses at Panel Joints: 24T8 to 24T10 or 24T10C 24T8A to 24T10A or 24T10D 24T8B to 24T10B or 24T10E	CD 221
9-X	Connection of 24T13D Bridging Trusses with 24T11B Bridging Truss at a Panel Joint	CD 213
9-XC	Connections of the following Bridging Trusses at Panel Joints: 24T9 to 24T11A, or 249A to 2411C	CD 222
10-XC	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7C 24T8A to 24T7D 24T8B to 24T7E	CD 221
11-X	Connection of the 24T15A Bridging Trusses at a 24T16B or 16C at a Panel Joint	CD 214
11-XC	Connection of 24T12 Bridging Truss with the 24T10, 10A, 10B, 10D, or 10E Bridging at Panel Joints 10C	CD 223
12-XC	Reserved	
13-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T25 Trusses with Double C32T18 Trusses	CD 228
14-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T2 Trusses Double C32T20 Trusses	CD 226
15-X	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 with a C32T22	CD 210
16-XC	Connection of 24T9 Bridging Truss at Double C32T25 Trusses with Double C32T19 Trusses	CD 227
17-XC	Connection of 24T9A Bridging Truss at Double C32T26 Trusses with Double C32T21 Trusses	CD 225
18-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T18 Trusses in Panel E and ER at Second Line of Bridging from Core End	CD 223
19-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T15 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at Second Line of Bridging from Core End	CD 223

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
☐ REJECTED
Date 2/25/69 By SK

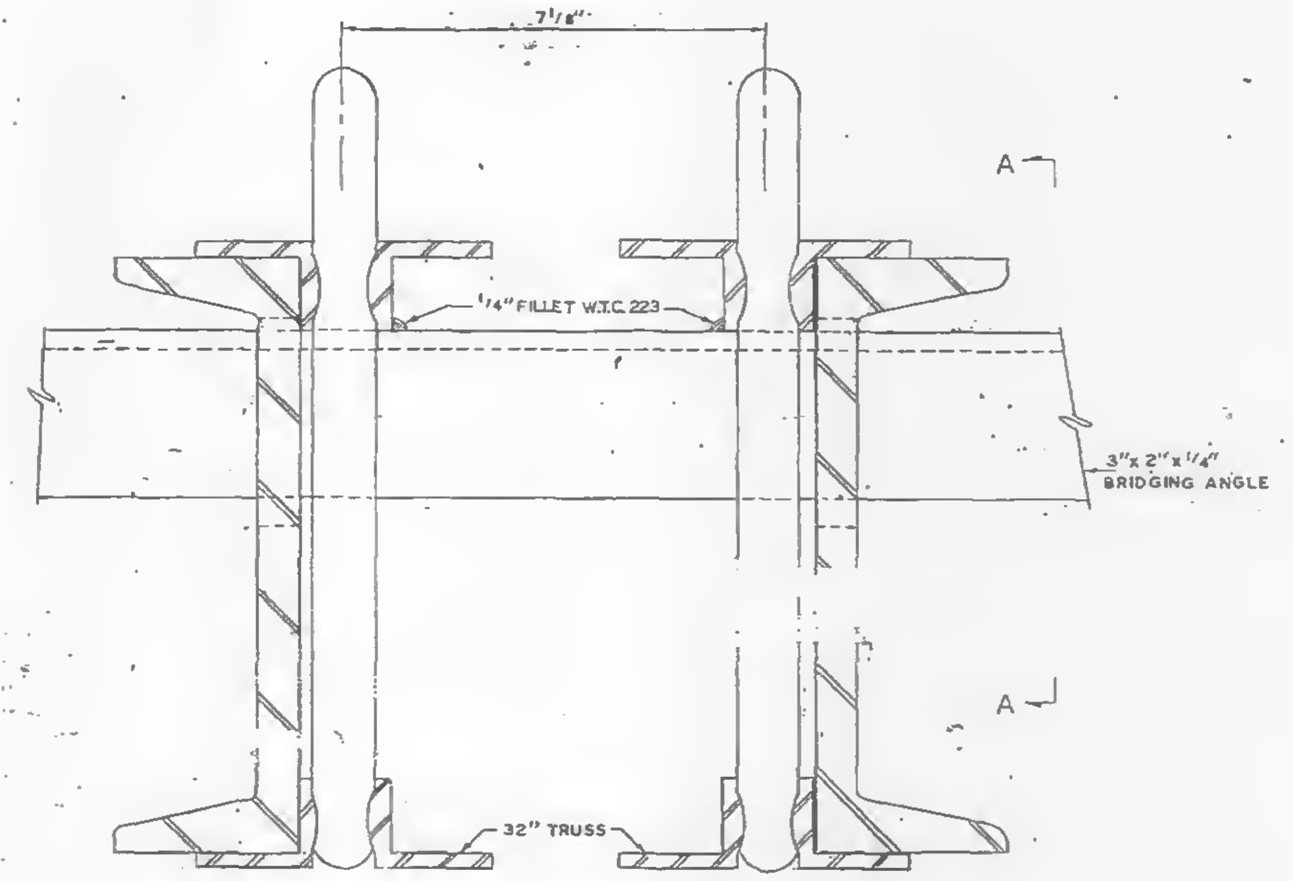
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-X & 2-X

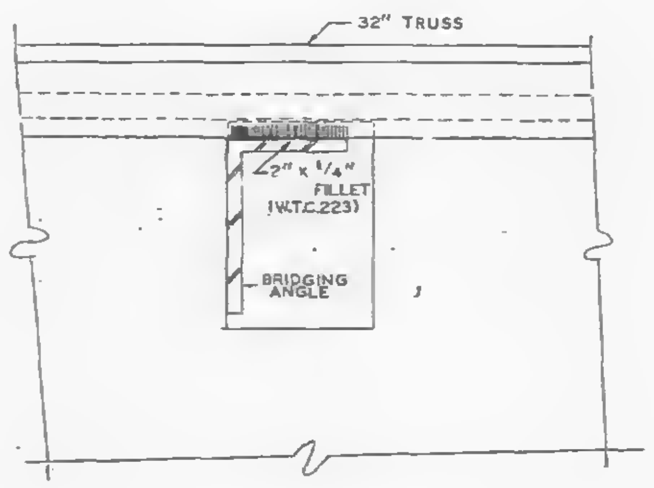
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: gdc DATE OCT. 8, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 8, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 211

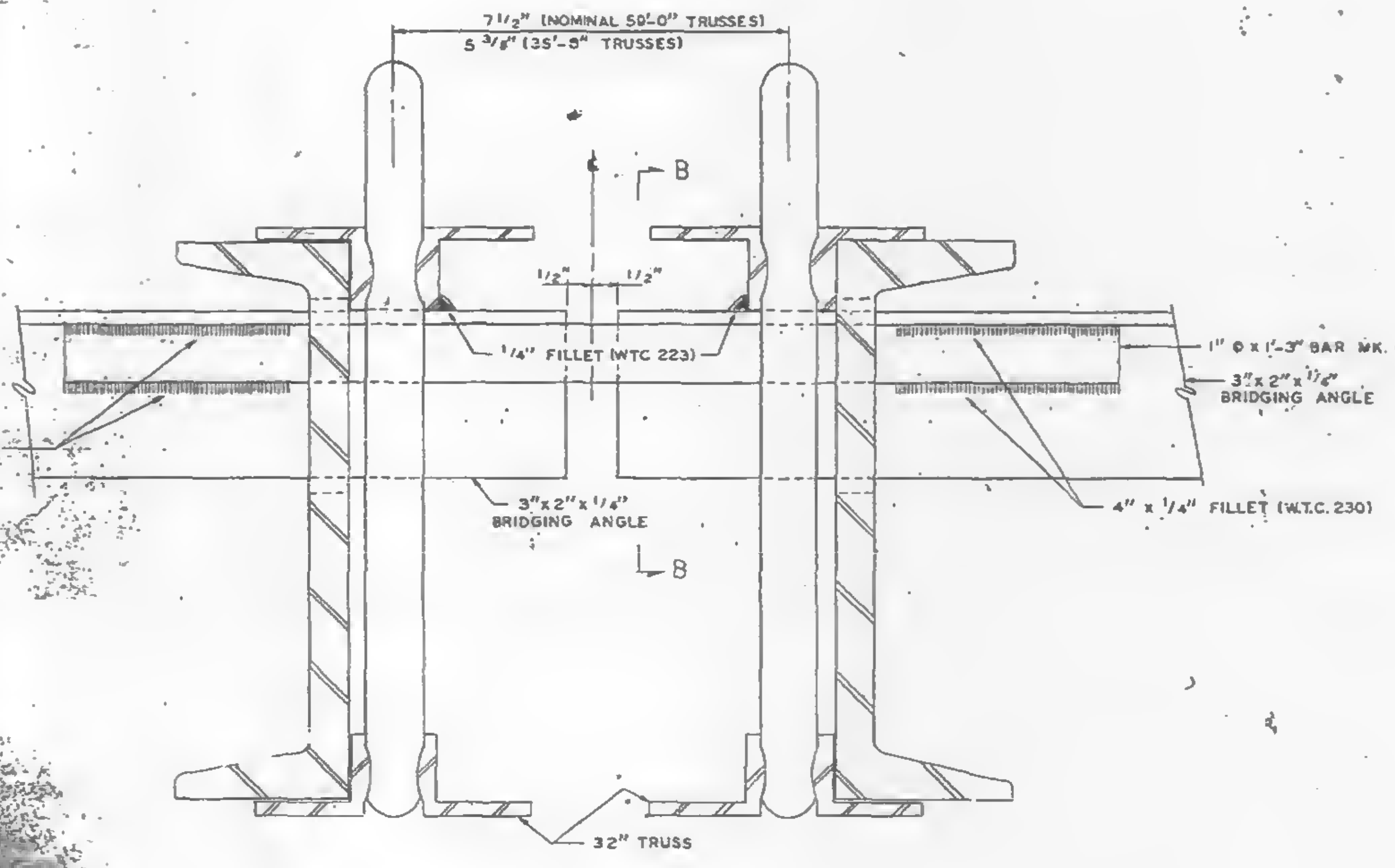
NO.	DATE	REVISION	BY
1	2-5-69	AS NOTED	G.D.C.



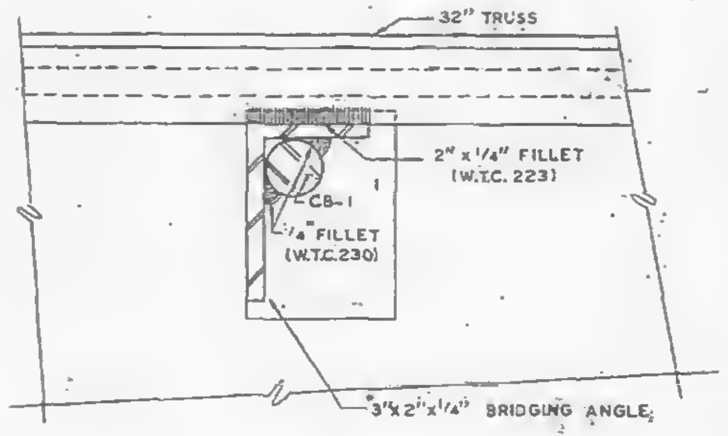
INTERIOR BRIDGING ANGLE CONNECTION (1-X)
PANELS: A2, B2, BR2, C2, CR2, D2
DR2, E2, ER2, F2 & FR2



SECTION A-A


7 1/2" (NOMINAL 50'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
B
B
1/2"
1/2"
1/4" FILLET (WTC 223)
1" ⌀ x 1'-3" BAR MK. CB-1
3" x 2" x 1/4" BRIDGING ANGLE
4" x 1/4" FILLET (W.T.C. 230)
3" x 2" x 1/4" BRIDGING ANGLE
4" x 1/4" FILLET (W.T.C. 230)
32" TRUSS

PANEL JOINT BRIDGING ANGLE CONNECTION (2-X)
PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2, FR2, G2,
GR2, H7, HR2 & J2.



SECTION B-B

LIST OF FLOOR CONNECTION INDENTIFICATIONS FOR FLOORS 25, 59, & 92
TOWERS A & B

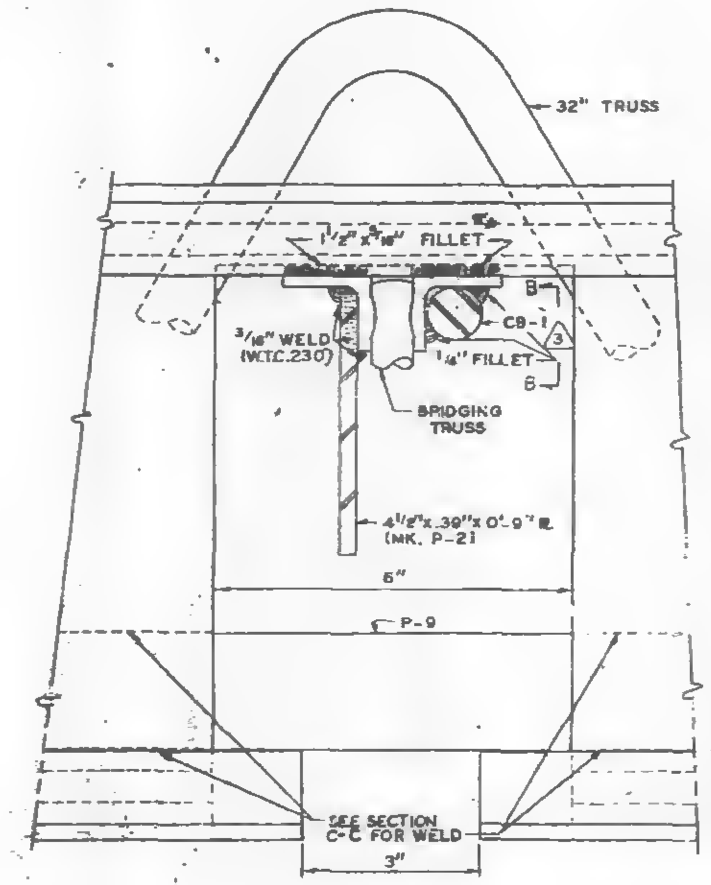
Connection Designation		Drawing No.
1-X	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 and FR2	CD 211
1-XA	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels G2, GR2, H7, HR2 and J2	CD 217
1-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Points	CD 220
2-X	Standard Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss at Panel Joints	CD 211
2-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 2-X, 13XC, 14XC and 15XC)	CD 220
3-XA	Connection of A35 and AA21 with a 32T22 in F2 and FR2 Panels	CD 218
3-XB	Connection of AA22 and AA23 with a C32T22 in F2 and FR2 Panels	CD 217
3-XC	Connection of AA9 Bridging Angles with C32T22 in F2 and FR2 Panels	CD 223
4-X	Connection of Interior Bridging Trusses with Extended End 32" Floor Trusses in Panels A2, B2, BR2, B7, BR7, C2, CR2, D2, DR2, D7, DR7, E2 and ER2	CD 215
4-XA	Connection of Interior Bridging Trusses with C32T21 in Panels F2 and FR2	CD 216
4-XCA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels A, B, BR, C and CR)	CD 220
4-XCB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels G2, GR2, H2, H7, HR7, HR2, J2)	CD 220
5-X	Connection of 24T14A Bridging Trusses with C32T22 Trusses at Interior Panel Points (Panels F2 and FR2)	CD 218
5-XC	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels D, DR, E, ER, F, FR, G and GR except 5-X, 6-X, 6-XA Connections in Panel F and FR)	CD 220
6-X	Connection of Interior Bridging Trusses 24T7C or 24T7E with C32T22	CD 219
6-XA	Connection of 24T7D Bridging Trusses with C32T22 at Interior Panel Points	CD 219
7-X	Connection of the following Bridging Trusses at Panel Joints: 24T14A to 2415A, or 24T11B to 24T13D, 13, 16B or 16C	CD 212
7-XC	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints except Special Cases 8-XC, 9-XC, 10-XC, 11-XC.	CD 220
8-XC	Connections of the following Bridging Trusses at Panel Joints: 24T8 to 24T10 or 24T10C 24T8A to 24T10A or 24T10D 24T8B to 24T10B or 24T10E	CD 221
9-X	Connection of 24T13D Bridging Trusses with 24T11B Bridging Truss at a Panel Joint	CD 213
9-XC	Connections of the following Bridging Trusses at Panel Joints: 24T9 to 24T11A, or 249A to 2411C	CD 222
10-XC	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7C 24T8A to 24T7D 24T8 to 24T7E	CD 221
11-X	Connection of the 24T15A Bridging Trusses at a 24T16B or 16C at a Panel Joint	CD 214
11-XC	Connection of 24T12 Bridging Truss with the 24T10, 10A, 10B, 10D, or 10E Bridging at Panel Joints	CD 223
12-XC	Reserved	
13-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses with Double C32T18 Trusses	CD 228
14-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses Double C32T20 Trusses	CD 226
15-X	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 with a C32T22	CD 210
16-XC	Connection of 24T9 Bridging Truss at Double C32T26 Trusses with Double C32T19 Trusses	CD 227
17-XC	Connection of 24T9A Bridging Truss at Double C32T[illegible] Trusses with Double C32T21 Trusses	CD 225
18-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T18 Trusses in Panel E and ER at Second Line of Bridging from Core End	CD 223
19-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T15 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at Second Line of Bridging from Core End	CD 223

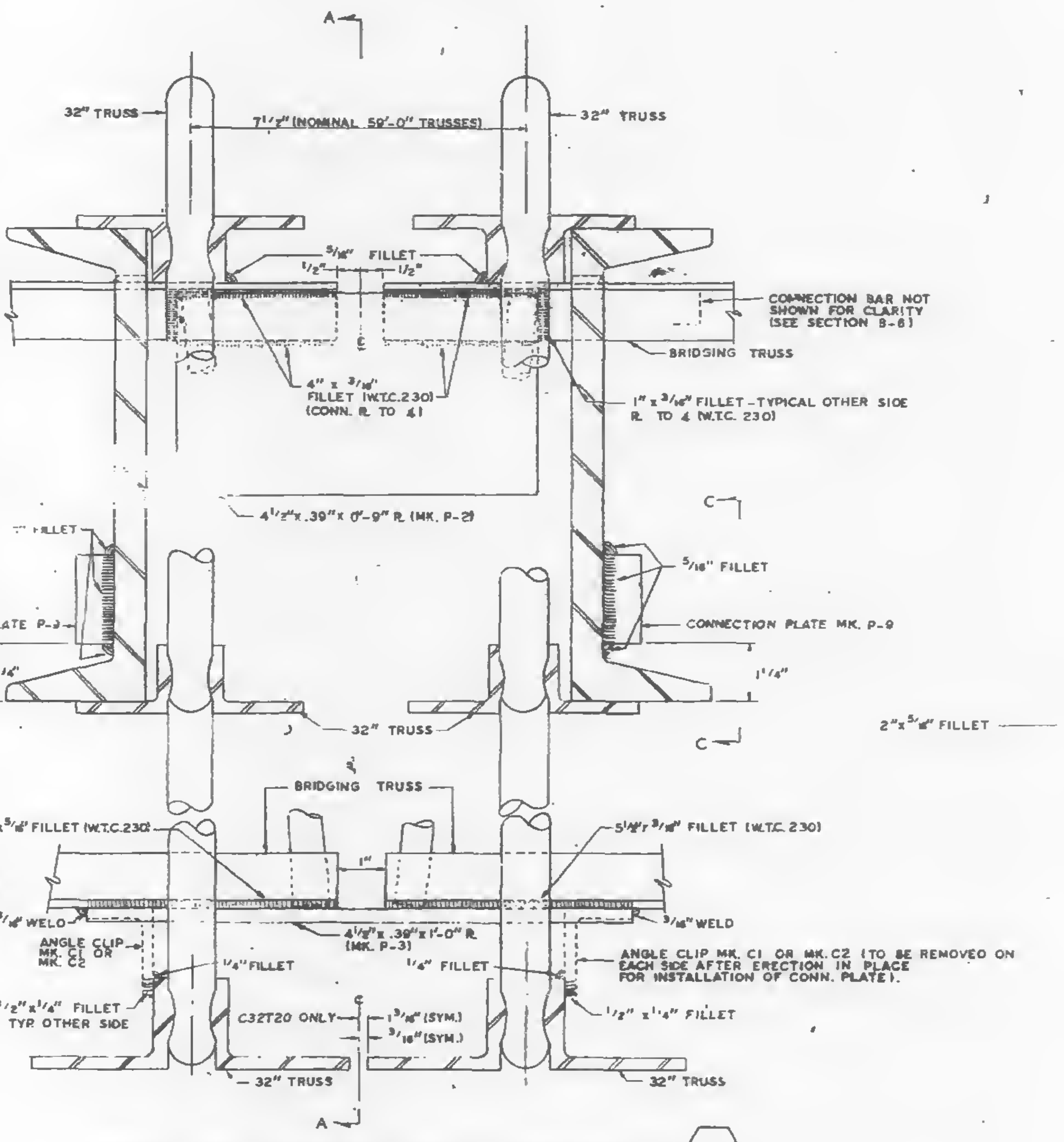
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

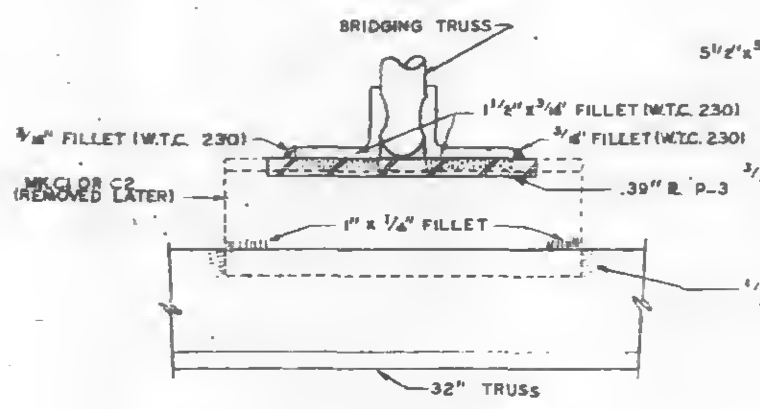
STANDARD CONNECTION DETAILS 1-X & 2-X

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: James FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: gdc DATE OCT. 8, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 8, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 211



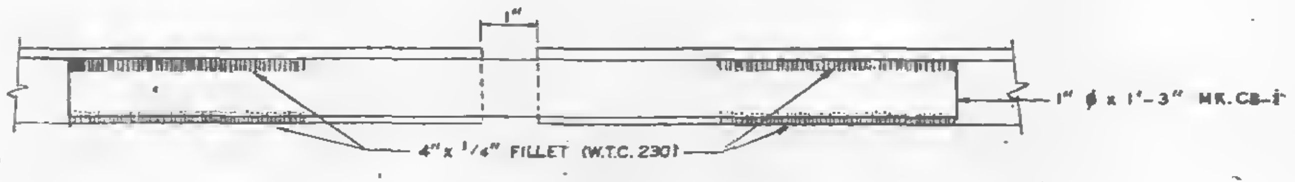

A
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
32" TRUSS
5/16" FILLET
1/2"
1/2"
CONNECTION BAR NOT SHOWN FOR CLARITY (SEE SECTION B-B)
BRIDGING TRUSS
4" x 3/16" FILLET (W.T.C. 230) (CONN. R TO 4)
1" x 3/16" FILLET - TYPICAL OTHER SIDE R TO 4 (W.T.C. 230)
4 1/2" x .39" x 0'-9" R (MK. P-2)
C
FILLET
5/16" FILLET
PLATE P-3
CONNECTION PLATE MK. P-9
1 1/4"
1 1/4"
32" TRUSS
C
BRIDGING TRUSS
5 1/2" x 5/16" FILLET (W.T.C. 230)
5 1/2" x 5/16" FILLET (W.T.C. 230)
1"
3/16" WELD
3/16" WELD
4 1/2" x .39" x 1'-0" R (MK. P-3)
ANGLE CLIP MK. C1 OR MK. C2
1/4" FILLET
1/4" FILLET
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE).
1/2" x 1/4" FILLET TYP. OTHER SIDE
C32T20 ONLY
1 3/16" (SYM.)
3/16" (SYM.)
1/2" x 1/4" FILLET
32" TRUSS
32" TRUSS
A


BRIDGING TRUSS
1 1/2" x 3/16" FILLET (W.T.C. 230)
3/16" FILLET (W.T.C. 230)
3/16" FILLET (W.T.C. 230)
MK. C1 OR C2 (REMOVED LATER)
.39" R P-3
1" x 1/4" FILLET
32" TRUSS

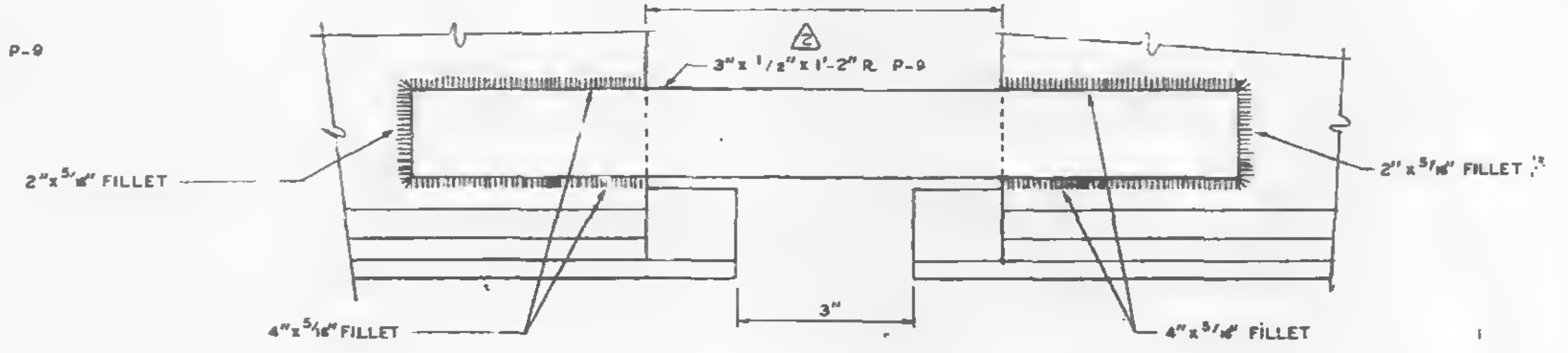
SECTION A-A

PANEL JOINT BRIDGING TRUSS CONNECTION 7-X

24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13
24T11B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C

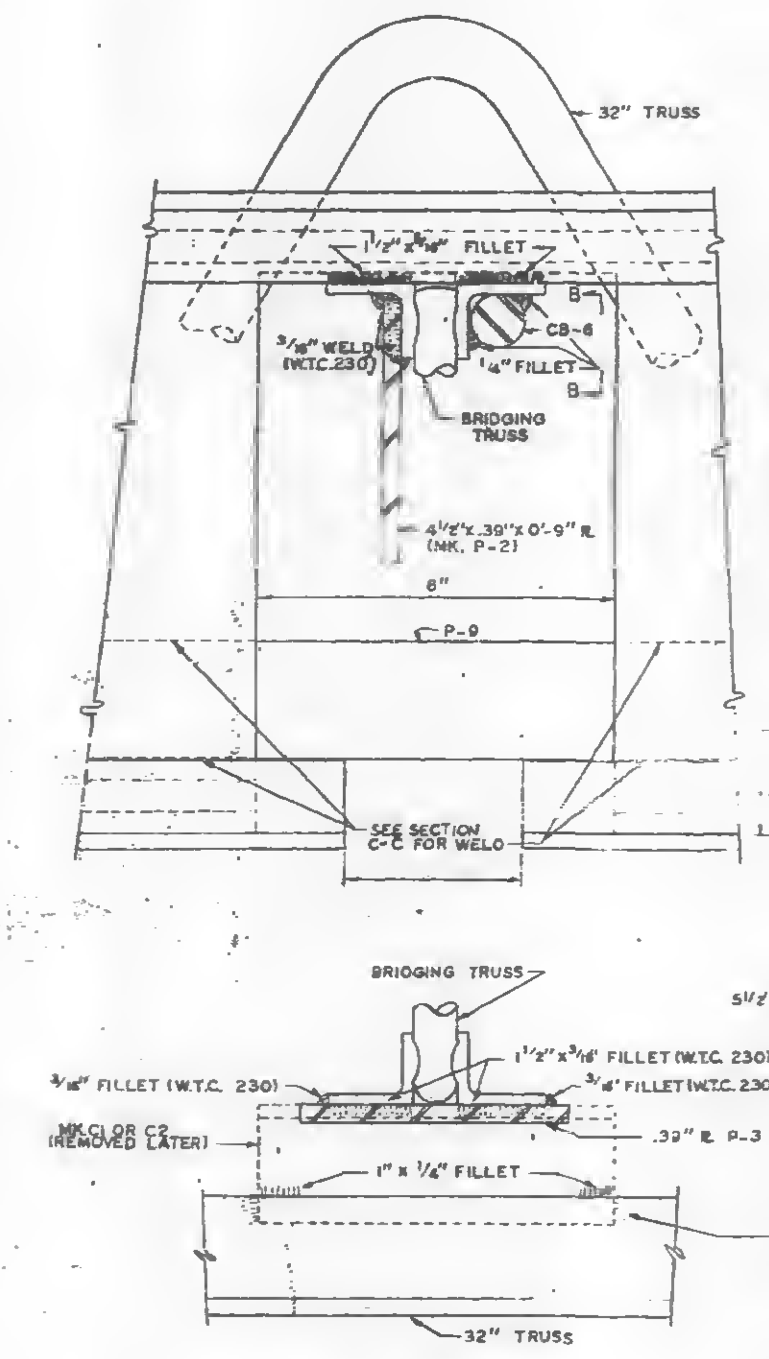
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS
IN THE E-70 SERIES OR EQUAL.
ALL PLATES & R SPLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CD-211 FOR FLOOR CONNECTION IDENTIFICATION
LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

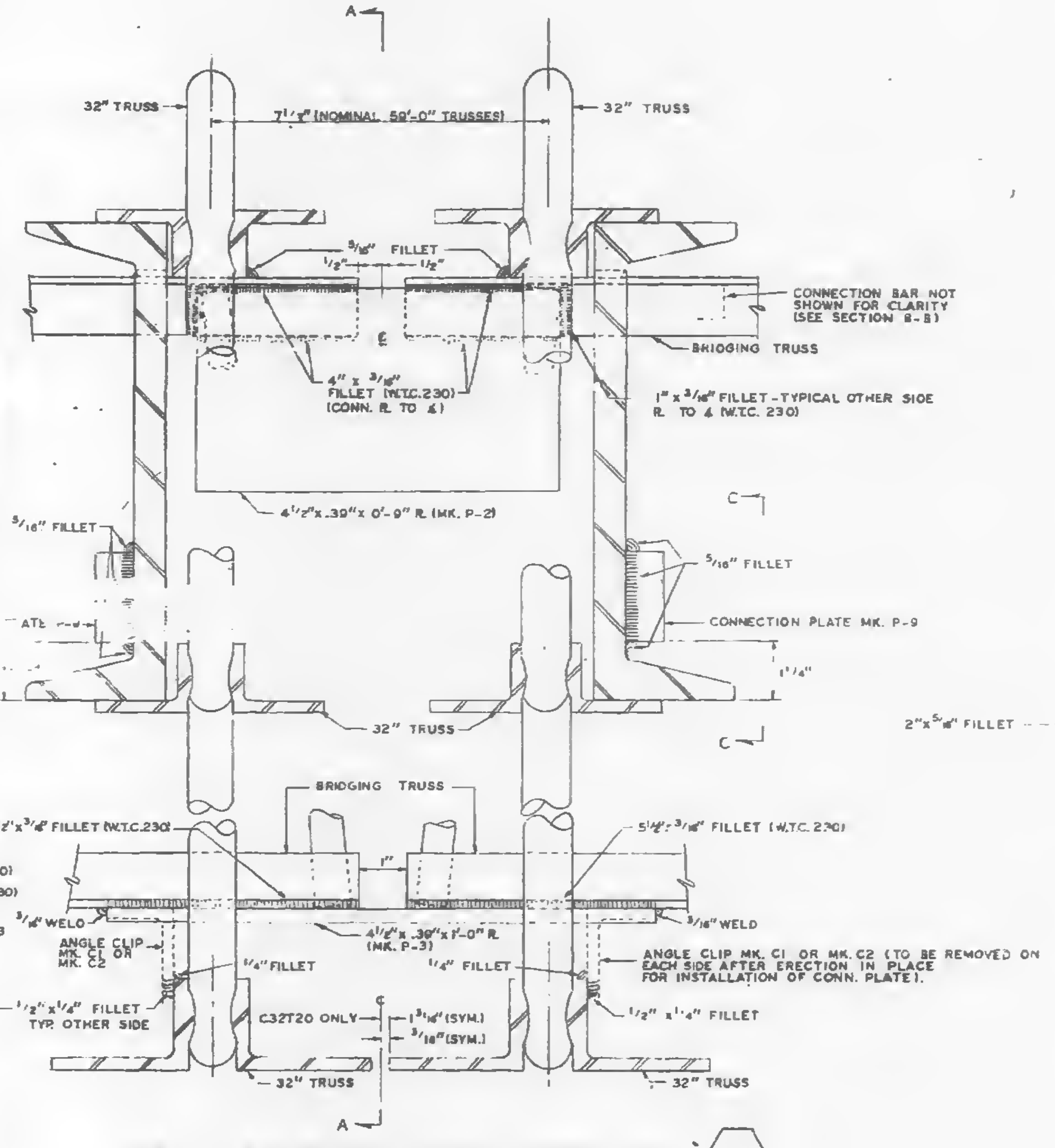
SPECIAL CONNECTION 7-X FOR FLOORS 25, 59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 1/31/69
James White
DRAWN BY: ac DATE OCT. 10, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE OCT. 10, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
LACLEDE STEEL CO.
FABRICATION CONT. NO: W.T.C. 221
SHEET NO. CD 212

NO.	DATE	REVISION	BY
3	1-9-68	AS NOTED	G.D.C.
2	11-6-68	P-9 R SIZE	G.D.C.
1	10-22-68	GENERAL	G.D.C.

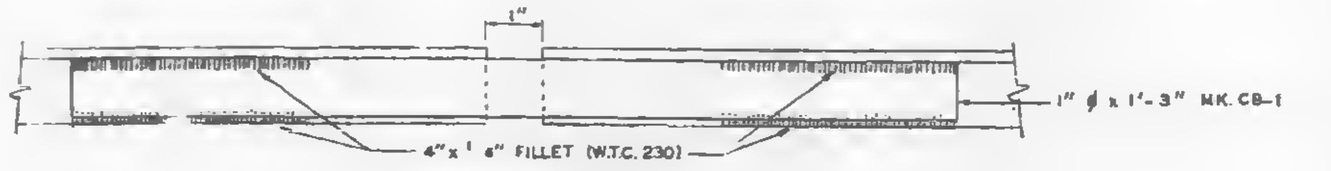


SECTION A-A

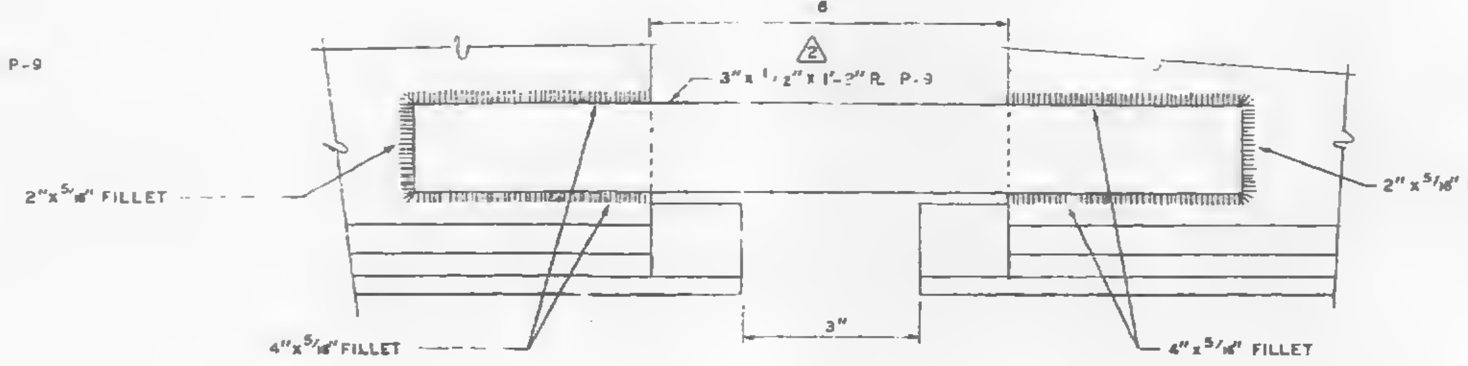

A
32" TRUSS
7½" (NOMINAL 59'-0" TRUSSES)
32" TRUSS
5/16" FILLET
½"
½"
CONNECTION BAR NOT SHOWN FOR CLARITY (SEE SECTION B-B)
℄
BRIDGING TRUSS
4" x 3/16" FILLET (W.T.C. 230) (CONN. R TO ℄)
1" x 3/16" FILLET - TYPICAL OTHER SIDE R TO ℄ (W.T.C. 230)
4½"x.39"x 0'-9" R (MK. P-2)
C
5/16" FILLET
5/16" FILLET
ATE P-9
CONNECTION PLATE MK. P-9
1¼"
32" TRUSS
C
BRIDGING TRUSS
5½"x3/16" FILLET (W.T.C. 230)
5½"x3/16" FILLET (W.T.C. 230)
1"
3/16" WELD
3/16" WELD
4½"x.39"x 1'-0" R (MK. P-3)
ANGLE CLIP MK. C1 OR MK. C2
¼" FILLET
¼" FILLET
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE).
½"x¼" FILLET TYP. OTHER SIDE
C32T20 ONLY
1 3/16" (SYM.)
3/16" (SYM.)
½" x ¼" FILLET
32" TRUSS
32" TRUSS
A

PANEL JOINT BRIDGING TRUSS CONNECTION (7-X)

24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13
24T11B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C

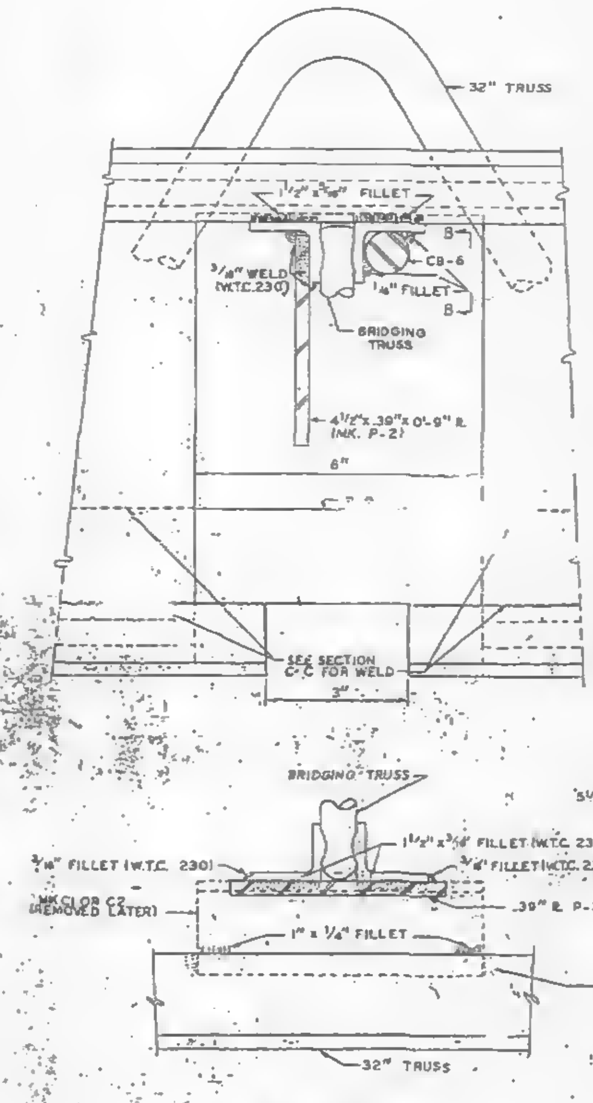
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & ɸ SPLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CO-211 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

NO.	DATE	REVISION	BY
2	11-6-68	P-9 R SIZE	G.D.C.
1	10-22-68	GENERAL	G.D.C.

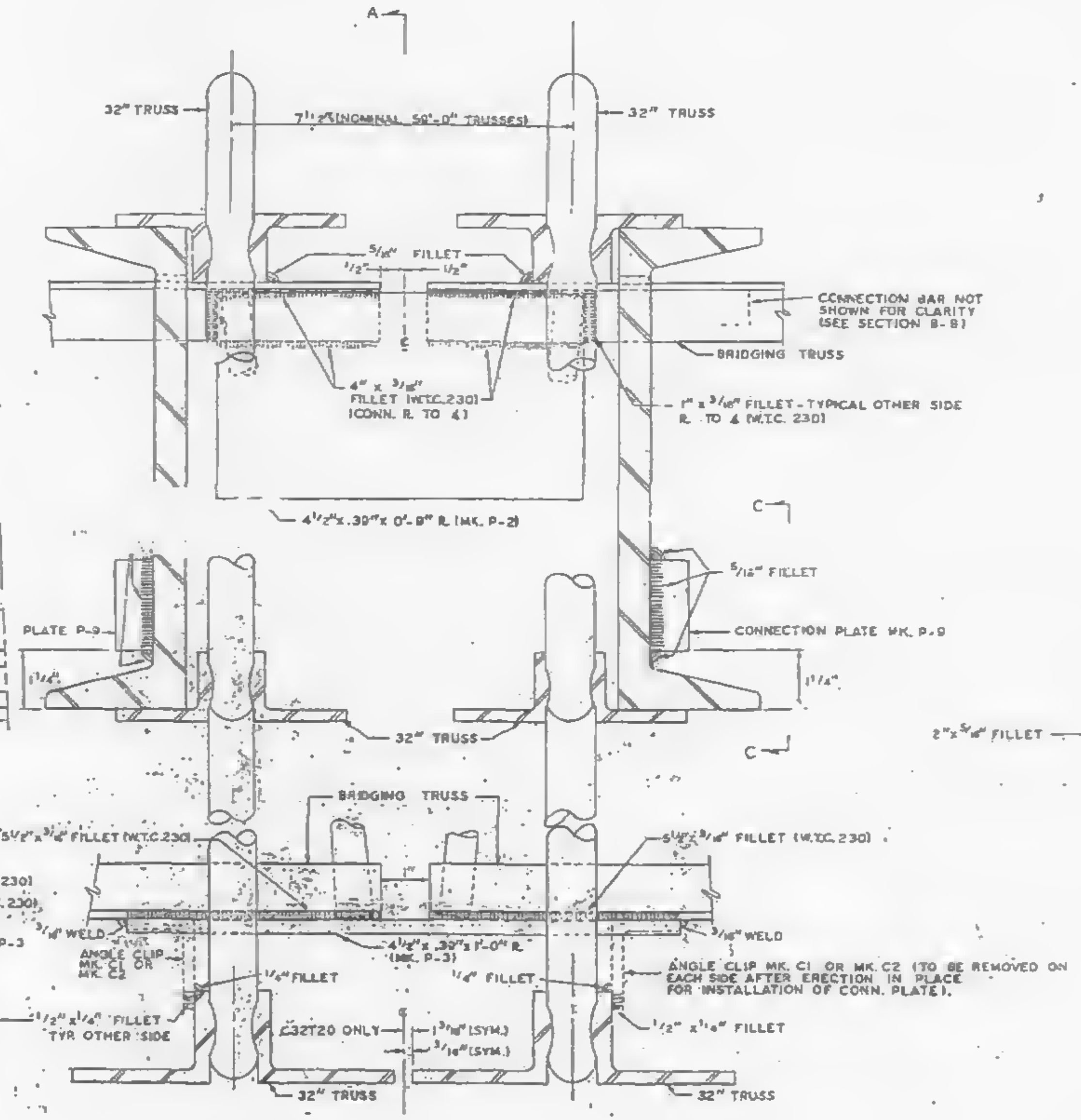
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

SPECIAL CONNECTION 7-X FOR FLOORS 25, 59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A. BY James White
DATE 11/15/68
DRAWN BY: gd
DATE OCT. 10, 1968
APPROVED FOR FABRICATION FOR FABRICATOR BY
DATE
CHECKED BY: T.M. CHURA
DATE OCT. 10, 1968
LACLEDE STEEL CO
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
CO-212

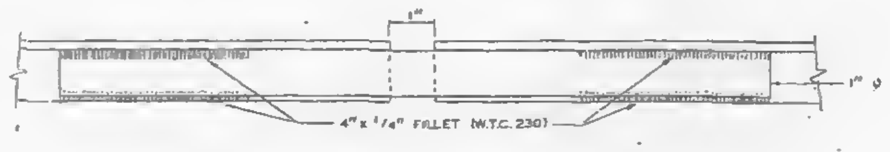


SECTION A-A

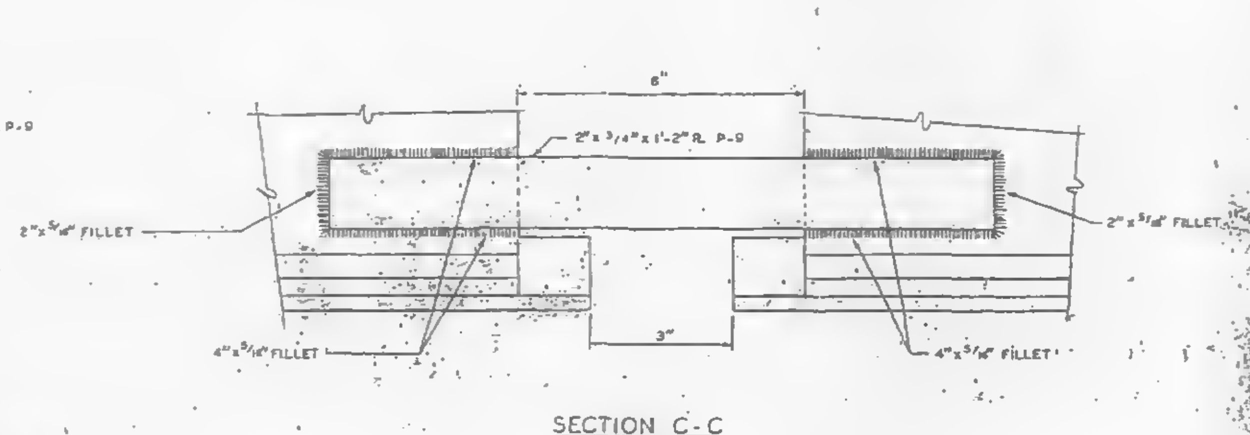

A
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
32" TRUSS
5/16" FILLET
1/2"
1/2"
CONNECTION BAR NOT SHOWN FOR CLARITY (SEE SECTION B-B)
BRIDGING TRUSS
4" x 3/16" FILLET (W.T.C. 230) (CONN. PL TO ℄)
1" x 3/16" FILLET - TYPICAL OTHER SIDE PL TO ℄ (W.T.C. 230)
4 1/2" x .39" x 0'-9" PL (MK. P-2)
C
5/16" FILLET
PLATE P-9
CONNECTION PLATE MK. P-9
1 1/4"
1 1/4"
32" TRUSS
C
BRIDGING TRUSS
5 1/2" x 3/16" FILLET (W.T.C. 230)
5 1/2" x 3/16" FILLET (W.T.C. 230)
1"
3/16" WELD
3/16" WELD
ANGLE CLIP MK. C1 OR MK. C2
4 1/2" x .39" x 1'-0" PL (MK. P-3)
1/4" FILLET
1/4" FILLET
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE).
1/2" x 1/4" FILLET TYP. OTHER SIDE
C32T20 ONLY
1 3/16" (SYM.)
3/16" (SYM.)
1/2" x 1/4" FILLET
32" TRUSS
32" TRUSS
A

PANEL JOINT BRIDGING TRUSS CONNECTION 7-X

24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13
24T11B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C

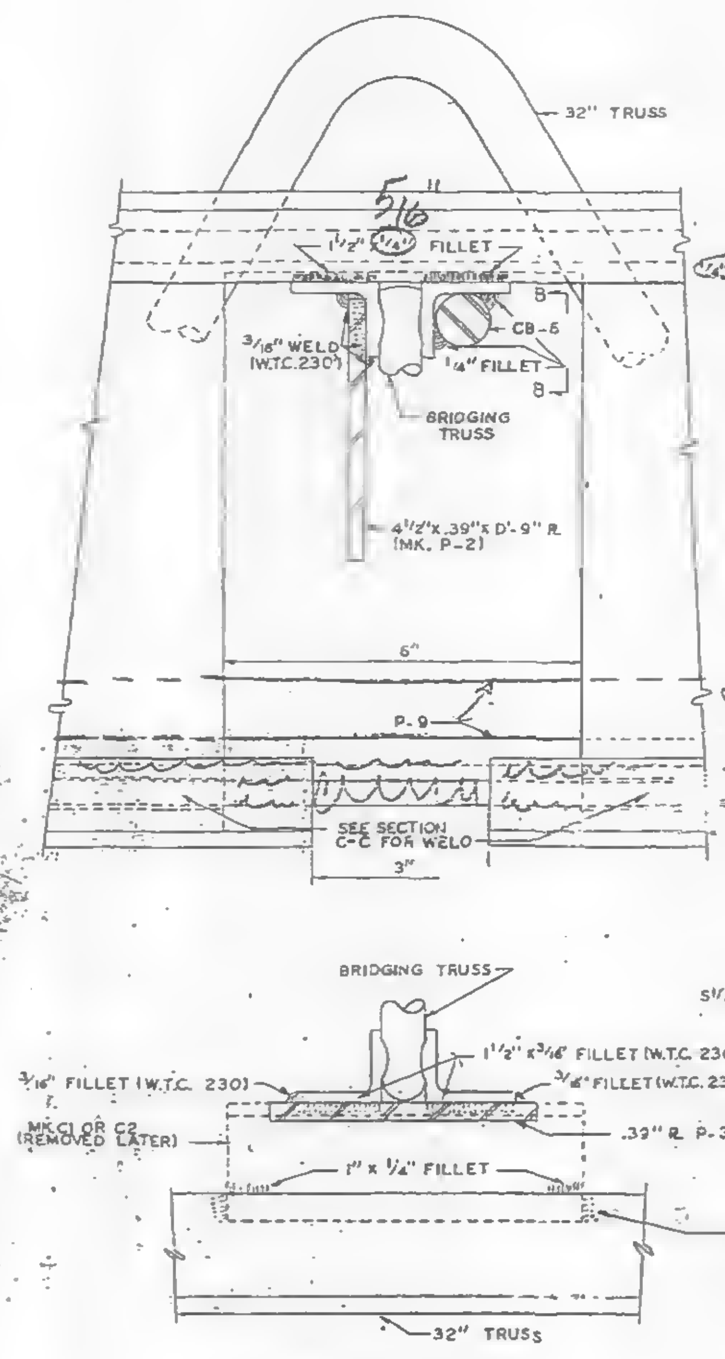
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & B SPLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CD-211 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

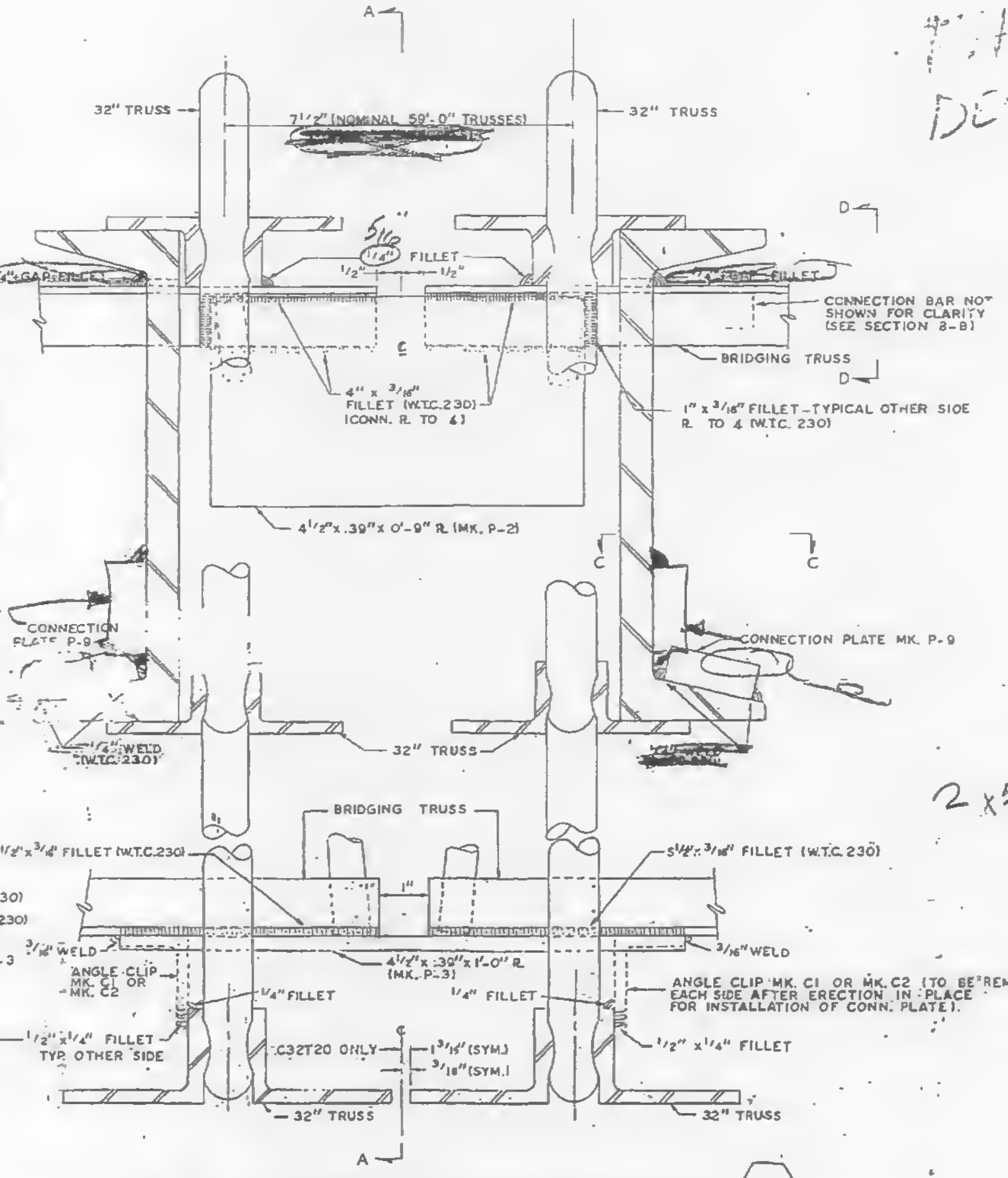
SPECIAL CONNECTION 7-X FOR FLOORS 25, 59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A. DATE 10/30/68
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
DETAILED BY: A. CARL WEBER
DRAWN BY: DATE OCT. 10, 1968
CHECKED BY: T.M. CHURA DATE OCT. 10, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD-212

NO.	DATE	REVISION	BY
⚠	10-22-68	GENERAL	G.D.C.



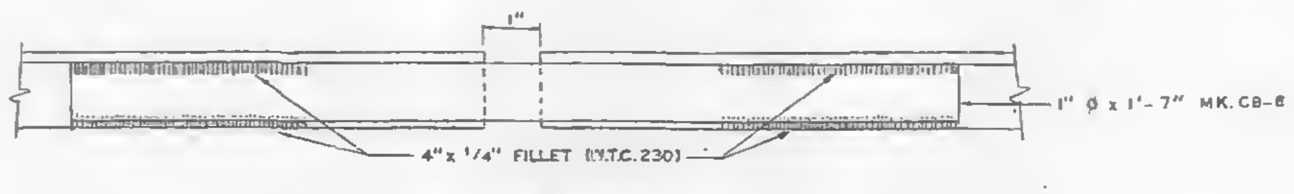
SECTION A-A


A
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
32" TRUSS
5/16"
1/4" FILLET
1/2"
1/2"
1/4" + GAP FILLET
1/4" + GAP FILLET
CONNECTION BAR NOT SHOWN FOR CLARITY (SEE SECTION B-B)
D
BRIDGING TRUSS
D
4" x 3/16" FILLET (W.T.C. 230) (CONN. ℞ TO ℄)
1" x 3/16" FILLET - TYPICAL OTHER SIDE ℞ TO ℄ (W.T.C. 230)
4 1/2" x .39" x 0'-9" ℞ (MK. P-2)
C
C
CONNECTION PLATE P-9
CONNECTION PLATE MK. P-9
1/4" WELD (W.T.C. 230)
32" TRUSS
BRIDGING TRUSS
5 1/2" x 3/16" FILLET (W.T.C. 230)
5 1/2" x 3/16" FILLET (W.T.C. 230)
1"
3/16" WELD
3/16" WELD
ANGLE CLIP MK. C1 OR MK. C2
4 1/2" x .39" x 1'-0" ℞ (MK. P-3)
1/4" FILLET
1/4" FILLET
ANGLE CLIP MK. C1 OR MK. C2 (TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE).
1/2" x 1/4" FILLET TYP. OTHER SIDE
C32T20 ONLY
℄
1 3/16" (SYM.)
3/16" (SYM.)
1/2" x 1/4" FILLET
32" TRUSS
32" TRUSS
A

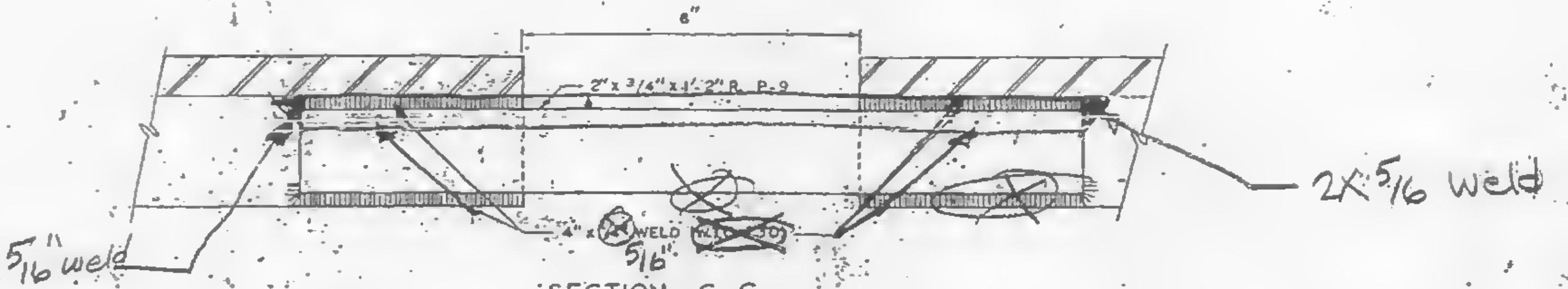
PANEL JOINT BRIDGING TRUSS CONNECTION 7-X

24T14A TO 24T15A
24T11B TO 24T130
24T11B TO 24T13[illegible]
24T11B TO 24T16B
24T11B TO 24T16C

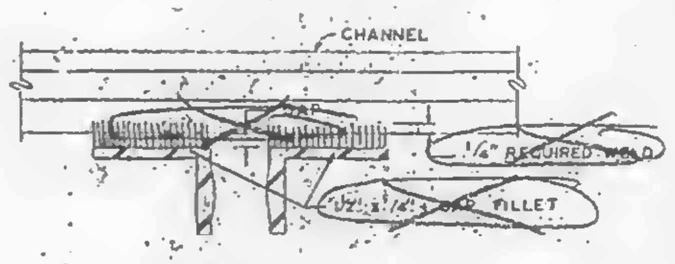
THIS WOULD BE A DESIRABLE WELD - Can it be made?



SECTION B-B



SECTION C-C



SECTION D-D

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & ∅ SPLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CD-211 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

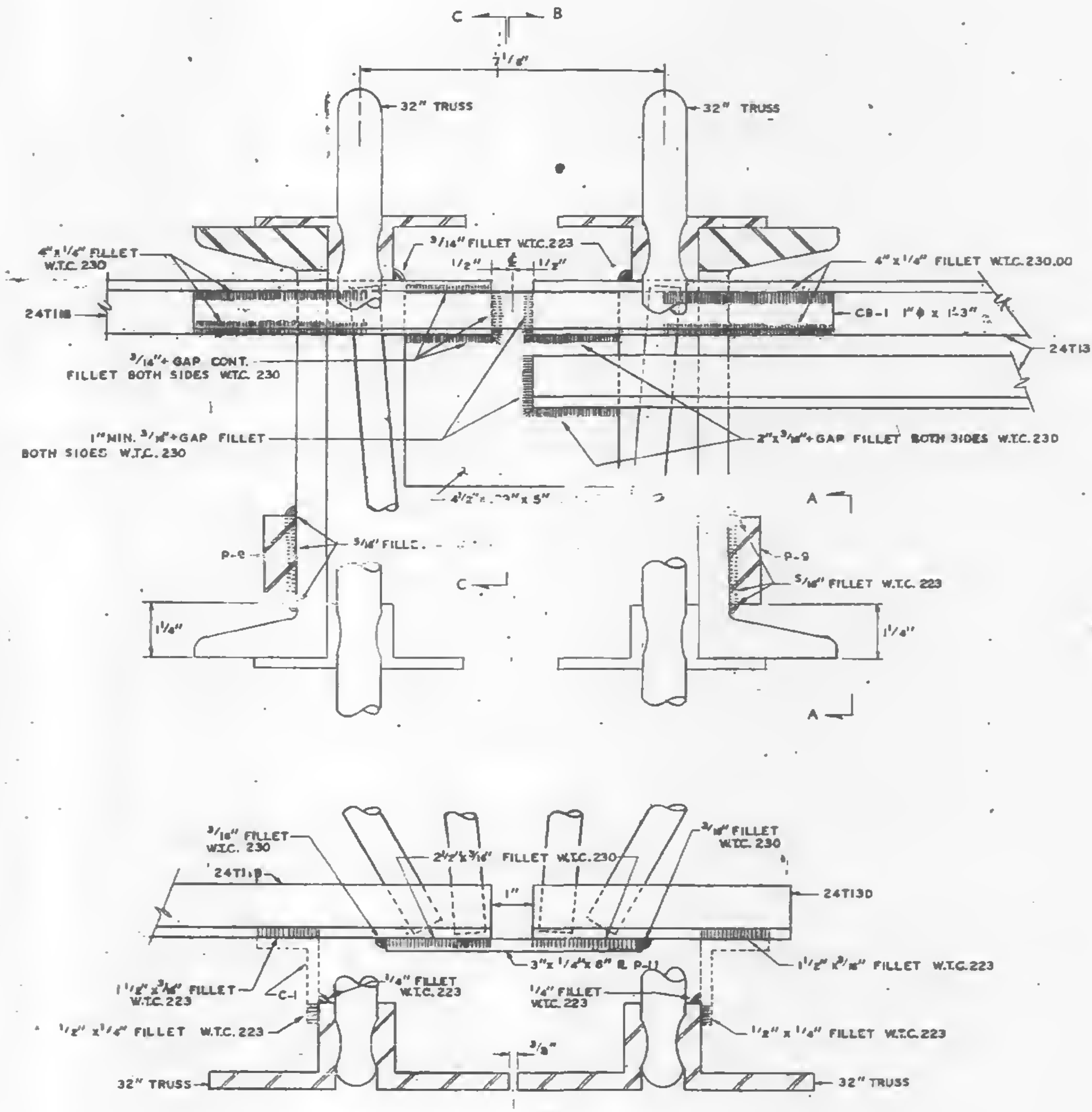
SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
☐ REJECTED
Date 10/18/68 By SK.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

SPECIAL CONNECTION 7-X FOR FLOORS 25, 59 & 92.

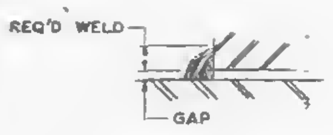
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	P.A.
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY gdc DATE OCT. 10, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE OCT. 10, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 212

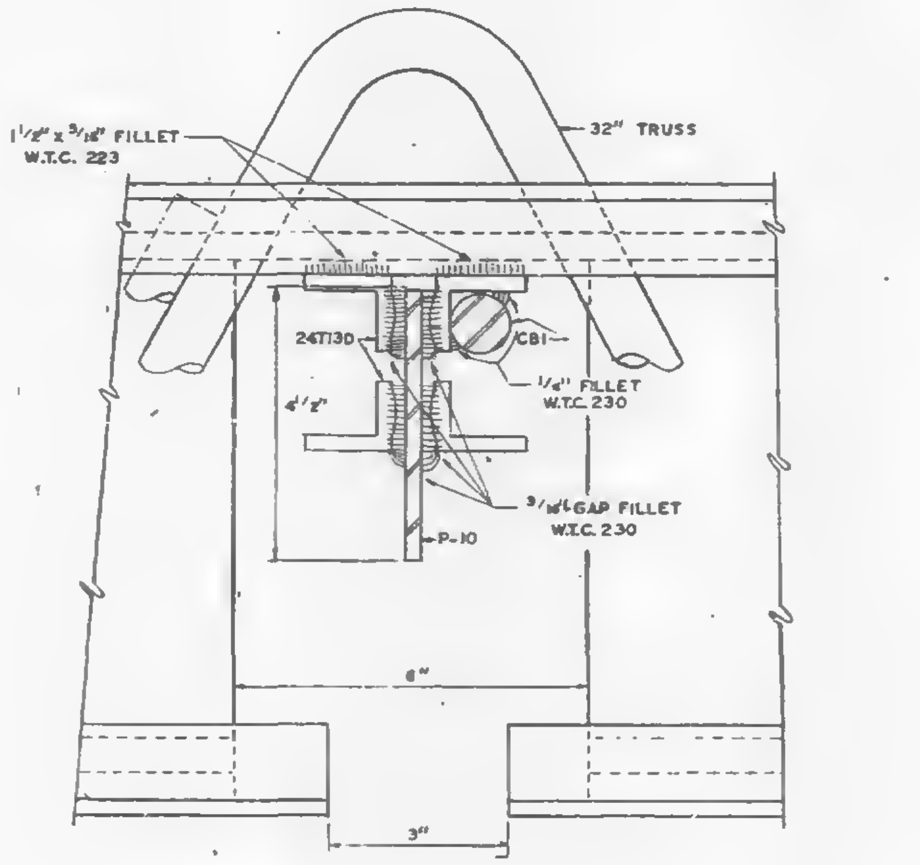

C
B
7 1/8"
32" TRUSS
32" TRUSS
4"x1/4" FILLET W.T.C. 230
3/16" FILLET W.T.C. 223
1/2"
℄
1/2"
4"x1/4" FILLET W.T.C. 230.00
24T118
CB-1 1"ϕ x 1'-3"
24T130
3/16"+GAP CONT. FILLET BOTH SIDES W.T.C. 230
1" MIN. 3/16"+GAP FILLET BOTH SIDES W.T.C. 230
2"x3/16"+GAP FILLET BOTH SIDES W.T.C. 230
4 1/2"x ...x 5"
A
P-9
3/16" FILLET
C
P-9
5/16" FILLET W.T.C. 223
1 1/4"
1 1/4"
A
3/16" FILLET W.T.C. 230
24T118
2 1/2"x3/16" FILLET W.T.C. 230
3/16" FILLET W.T.C. 230
24T130
1"
3"x1/4"x6" ℄ P-11
1 1/2"x3/16" FILLET W.T.C. 223
1 1/2"x3/16" FILLET W.T.C. 223
C-1
1/4" FILLET W.T.C. 223
1/4" FILLET W.T.C. 223
1/2"x1/4" FILLET W.T.C. 223
1/2"x1/4" FILLET W.T.C. 223
3/8"
32" TRUSS
32" TRUSS
B

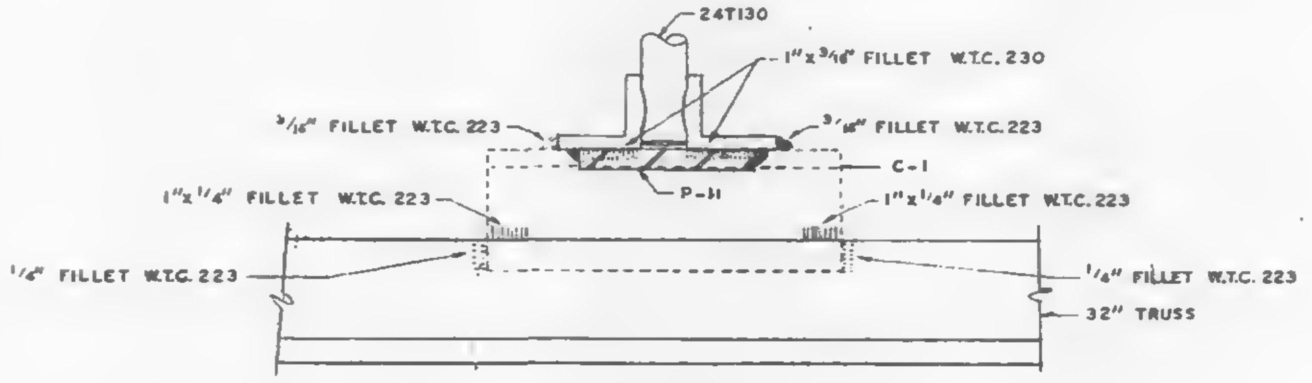
PANEL JOINT BRIDGING TRUSS CONNECTION 9-X

24T130 TO 24T118



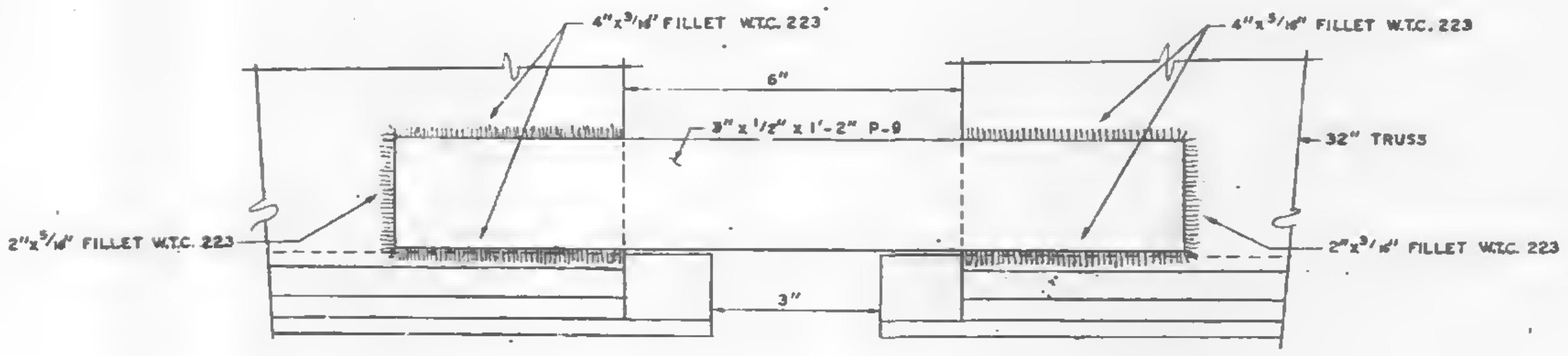
DETAIL "A"



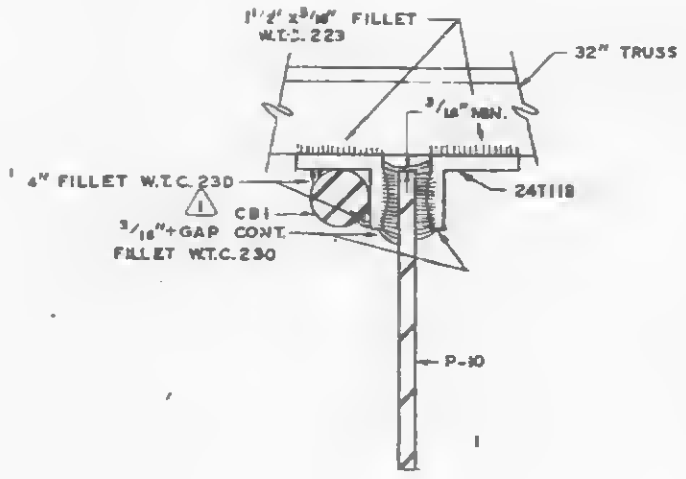


SECTION B-B

ALL ARC WELD TO BE MADE WITH LOW HYDROGEN RODS IN THE
E-70 SERIES OR EQUAL.
ALL PLATES & ϕ SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE DETAIL A (THIS SHEET) FOR ALL +GAP WELDS.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS
25, 59 & 92.


4"x3/16" FILLET W.T.C. 223
4"x3/16" FILLET W.T.C. 223
6"
3"x1/2"x1'-2" P-9
32" TRUSS
2"x5/16" FILLET W.T.C. 223
2"x3/16" FILLET W.T.C. 223
3"

SECTION A-A


1 1/2"x3/16" FILLET W.T.C. 223
32" TRUSS
3/16" MIN.
4" FILLET W.T.C. 230
1
CB1
3/16"+GAP CONT. FILLET W.T.C. 230
24T118
P-10

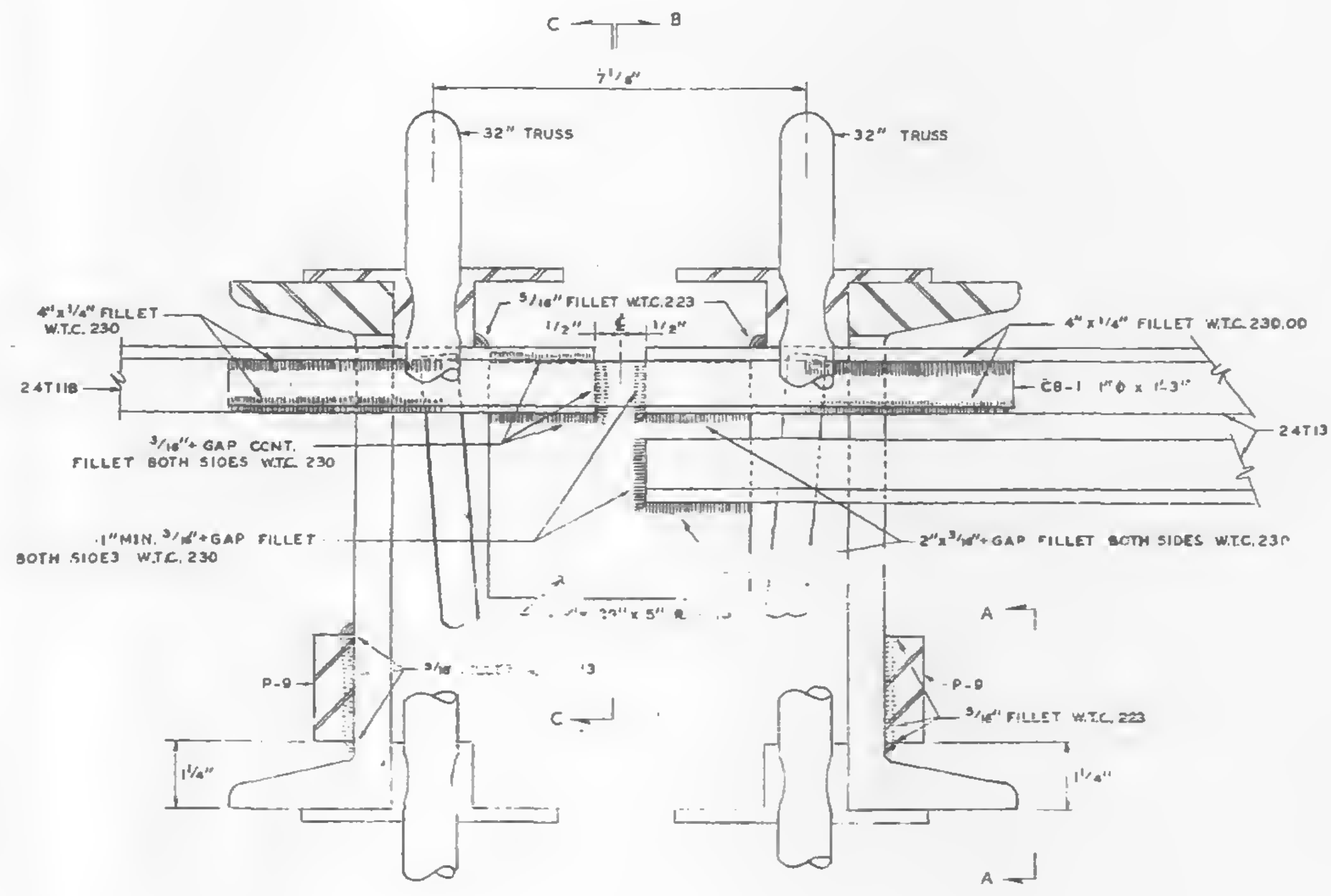
SECTION C-C

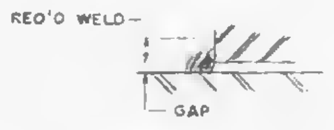
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 9-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

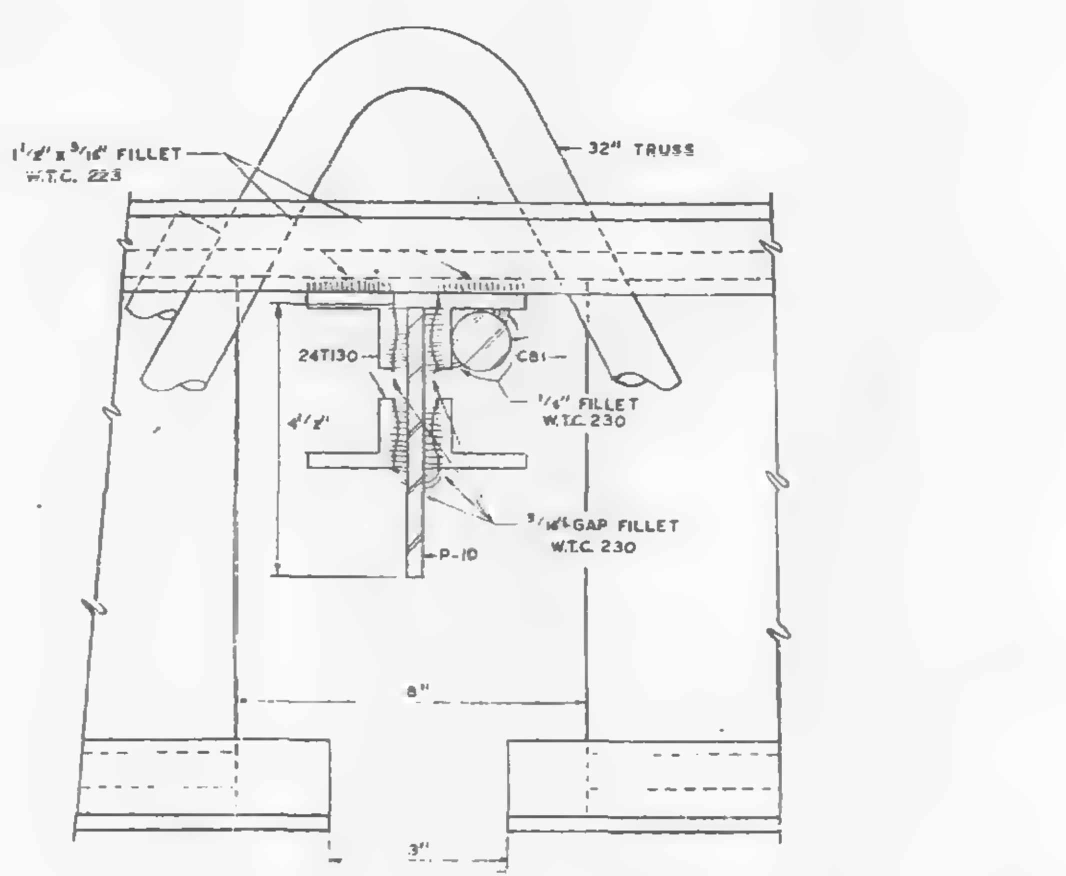
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE 1
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 12/6/68
DRAWN BY: gdc DATE OCT. 24, 1968
APPROVED FOR FABRICATION FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE OCT. 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 213

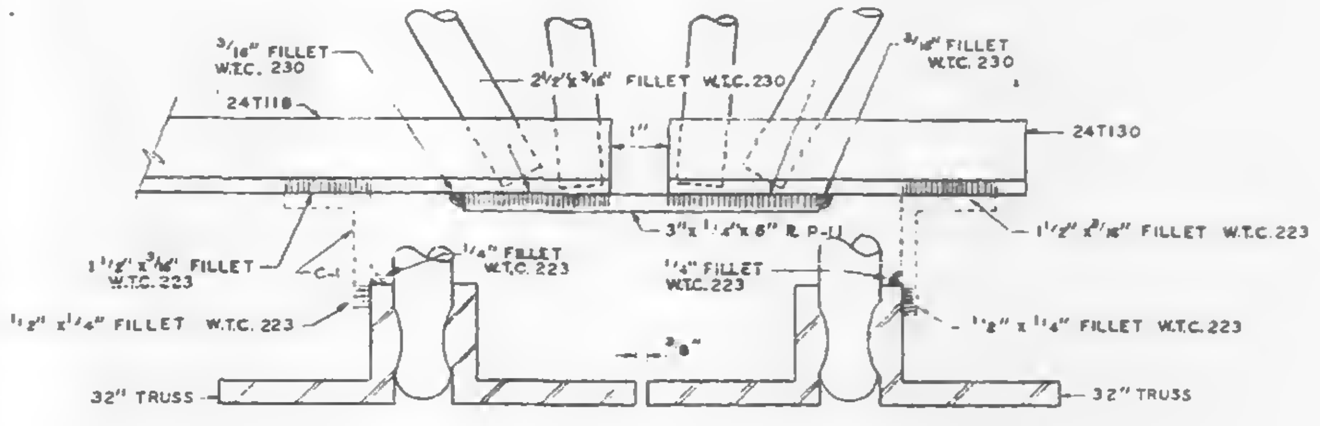
NO.	DATE	REVISION	BY
1	11-21-68	AS NOTED	G.D.C.


C B
7 1/8"
32" TRUSS
32" TRUSS
4"x1/4" FILLET W.T.C. 230
5/16" FILLET W.T.C. 223
1/2" ℄ 1/2"
4"x1/4" FILLET W.T.C. 230.00
24T118
C8-1 1"Φ x 1'-3"
24T130
3/16"+ GAP CONT. FILLET BOTH SIDES W.T.C. 230
1" MIN. 3/16"+ GAP FILLET BOTH SIDES W.T.C. 230
2"x3/16"+ GAP FILLET BOTH SIDES W.T.C. 230
A
P-9
P-9
5/16" FILLET W.T.C. 223
C
1 1/4"
1 1/4"
A



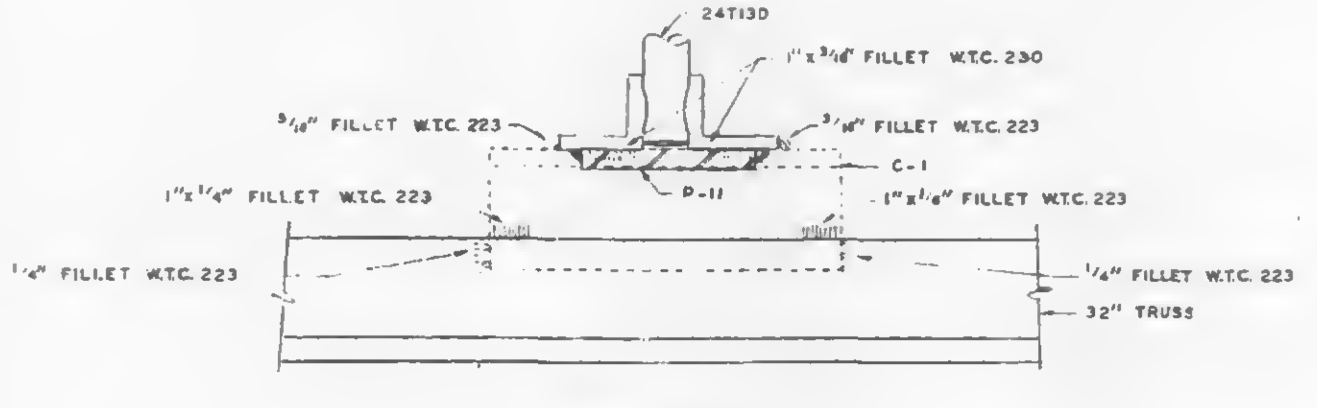
DETAIL "A"




3/16" FILLET W.T.C. 230
2 1/2"x3/16" FILLET W.T.C. 230
3/16" FILLET W.T.C. 230
24T118
1"
24T130
3"x1 1/4"x8" ℞ P-11
1 1/2"x3/16" FILLET W.T.C. 223
1 1/2"x3/16" FILLET W.T.C. 223
C-1
1/4" FILLET W.T.C. 223
1/4" FILLET W.T.C. 223
1 1/2"x1 1/4" FILLET W.T.C. 223
1 1/2"x1 1/4" FILLET W.T.C. 223
3/8"
32" TRUSS
32" TRUSS
B

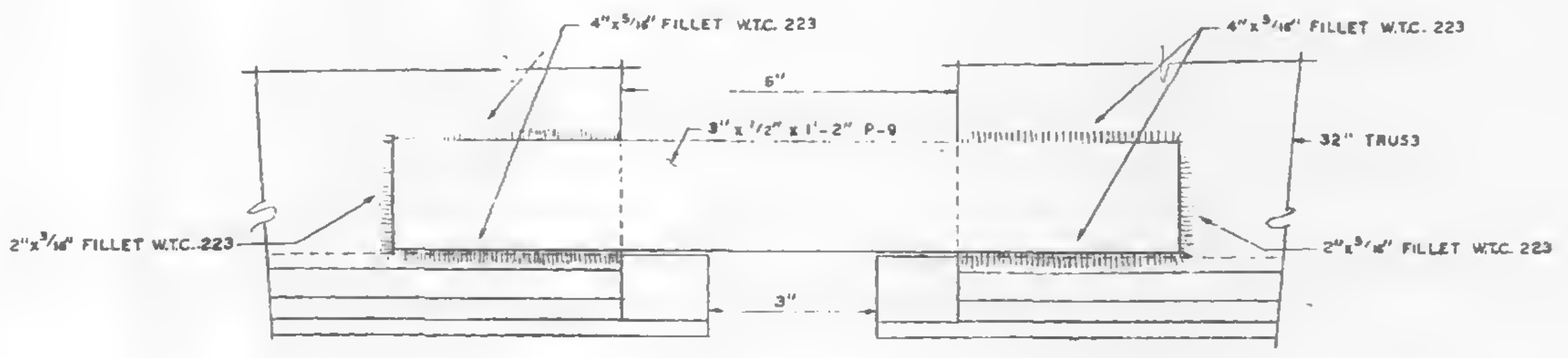
PANEL JOINT BRIDGING TRUSS CONNECTION (9-X)

24T130 TO 24T118

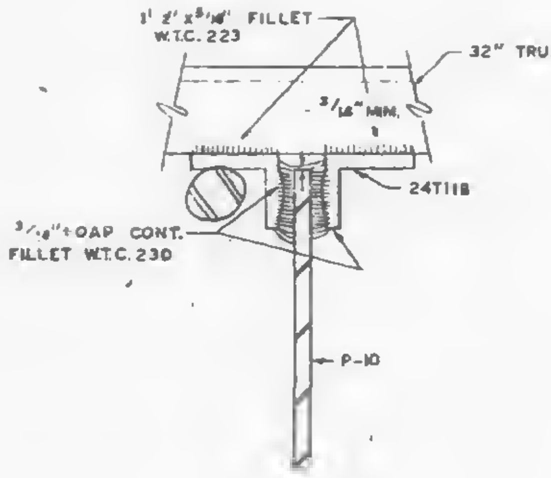


SECTION B-B

ALL ARC WELD TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & Φ SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE DETAIL A (THIS SHEET) FOR ALL + GAP WELDS.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.


4"x5/16" FILLET W.T.C. 223
4"x5/16" FILLET W.T.C. 223
6"
3"x1/2"x1'-2" P-9
32" TRUSS
2"x3/16" FILLET W.T.C. 223
2"x3/16" FILLET W.T.C. 223
3"

SECTION A-A


1 1/2"x5/16" FILLET W.T.C. 223
32" TRUSS
3/16" MIN.
24T118
3/16"+GAP CONT. FILLET W.T.C. 230
P-10

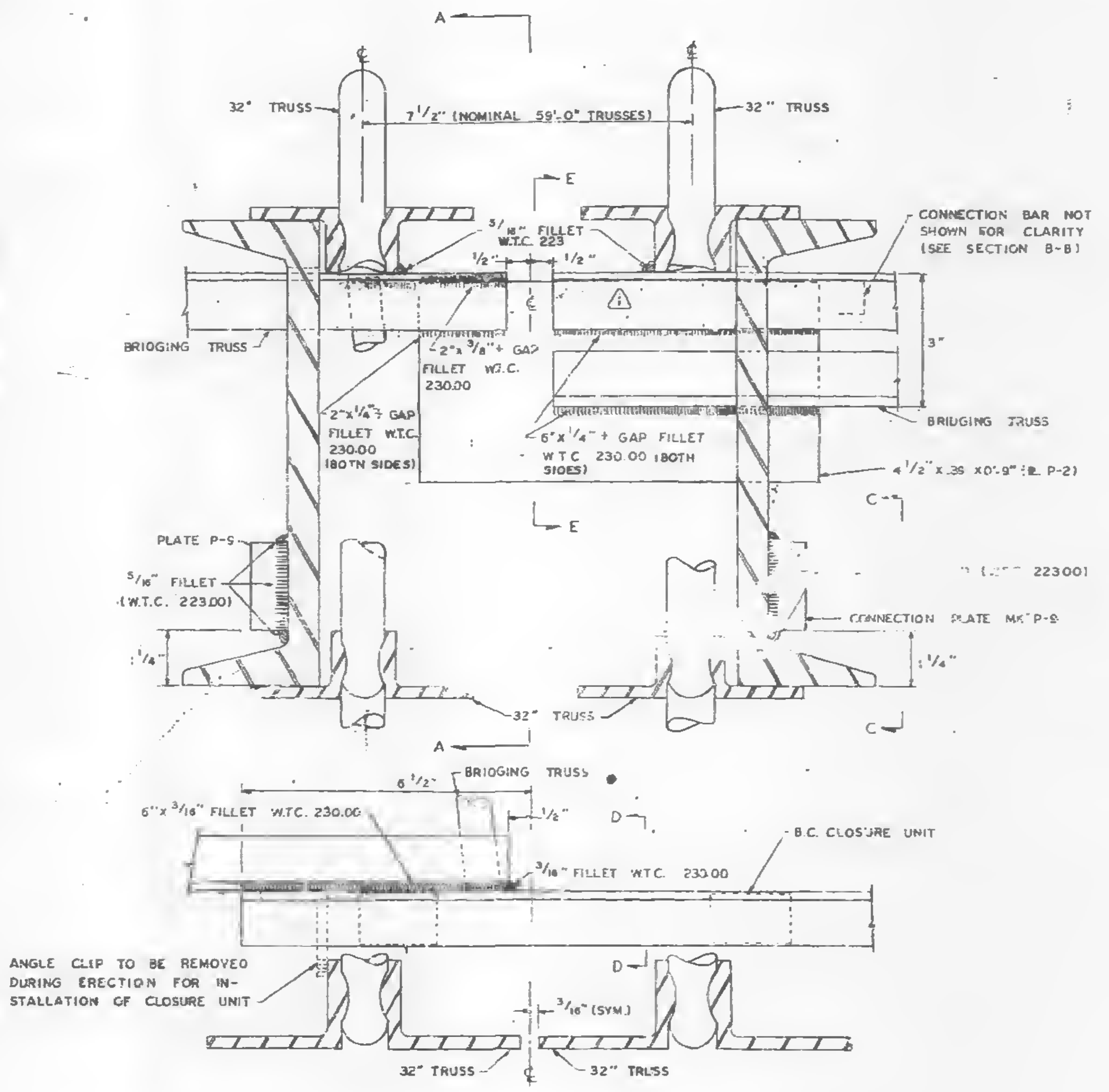
SECTION C-C

11/15/68 SC

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

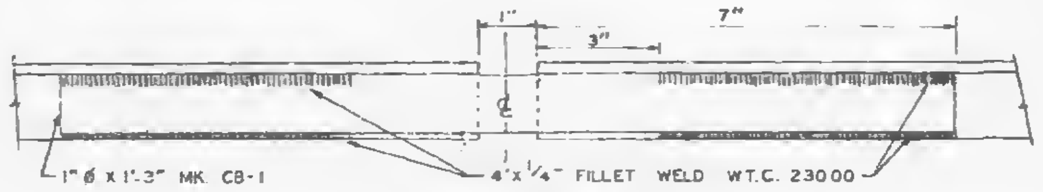
CONNECTION DETAIL 9-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE
DRAWN BY: rdc
DATE OCT. 24, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA
DATE OCT. 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: R. CARL WEBER
LACLEDE STEEL CO.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 213

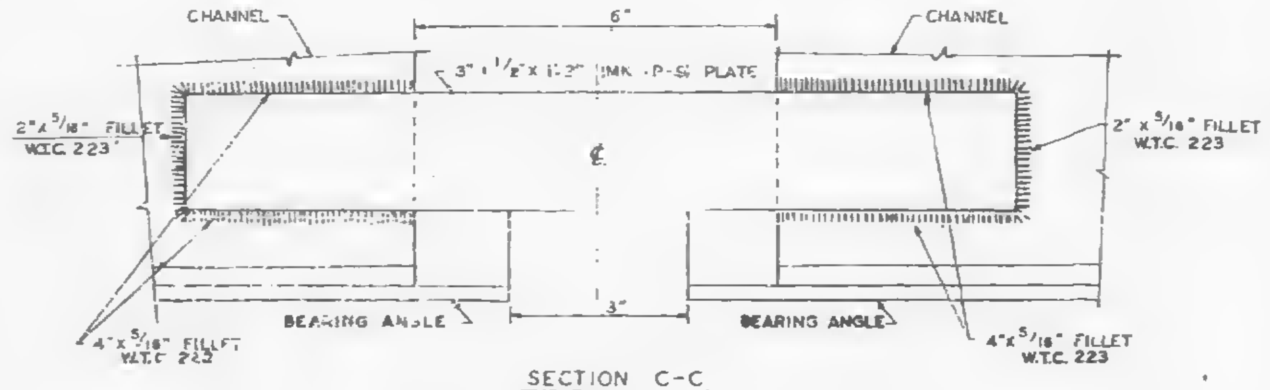

A
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
32" TRUSS
E
3/16" FILLET W.T.C. 223
1/2"
1/2"
CONNECTION BAR NOT SHOWN FOR CLARITY (SEE SECTION B-B)
BRIDGING TRUSS
2"x 3/8" + GAP FILLET W.T.C. 230.00
3"
2"x 1/4" + GAP FILLET W.T.C. 230.00 (BOTH SIDES)
6"x 1/4" + GAP FILLET W.T.C. 230.00 (BOTH SIDES)
BRIDGING TRUSS
4 1/2" x .36 x 0'-9" (PL P-2)
C
E
PLATE P-9
5/16" FILLET (W.T.C. 223.00)
223.00)
CONNECTION PLATE MK P-9
1/4"
1/4"
32" TRUSS
32" TRUSS
C
A
6 1/2"
BRIDGING TRUSS
6"x 3/16" FILLET W.T.C. 230.00
1/2"
D
B.C. CLOSURE UNIT
3/16" FILLET W.T.C. 230.00
ANGLE CLIP TO BE REMOVED DURING ERECTION FOR INSTALLATION OF CLOSURE UNIT
D
3/16" (SYM.)
32" TRUSS
32" TRUSS

PANEL JOINT BRIDGING TRUSS CONNECTION (11-X)

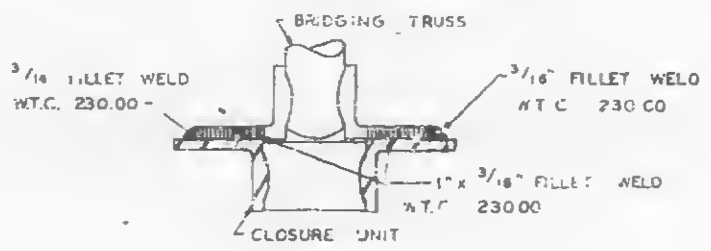
24T15A TO 24T16B
24T15A TO 24T16C



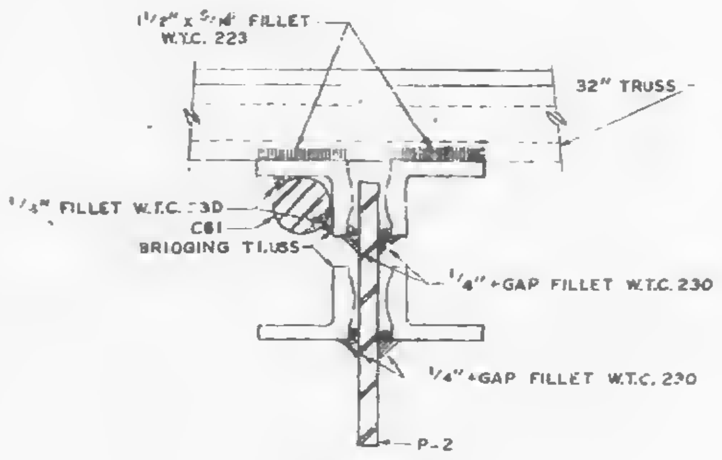
SECTION B-B


CHANNEL
6"
CHANNEL
3" x 1/2" x 1'-2" (MK P-9) PLATE
2"x 5/16" FILLET W.T.C. 223
2" x 5/16" FILLET W.T.C. 223
3"
BEARING ANGLE
BEARING ANGLE
4"x 5/16" FILLET W.T.C. 223
4"x 5/16" FILLET W.T.C. 223

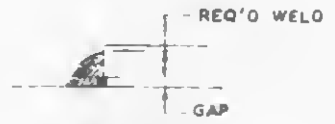
SECTION C-C


BRIDGING TRUSS
3/16 FILLET WELD W.T.C. 230.00
3/16" FILLET WELD W.T.C. 230.00
1" x 3/16" FILLET WELD W.T.C. 230.00
CLOSURE UNIT

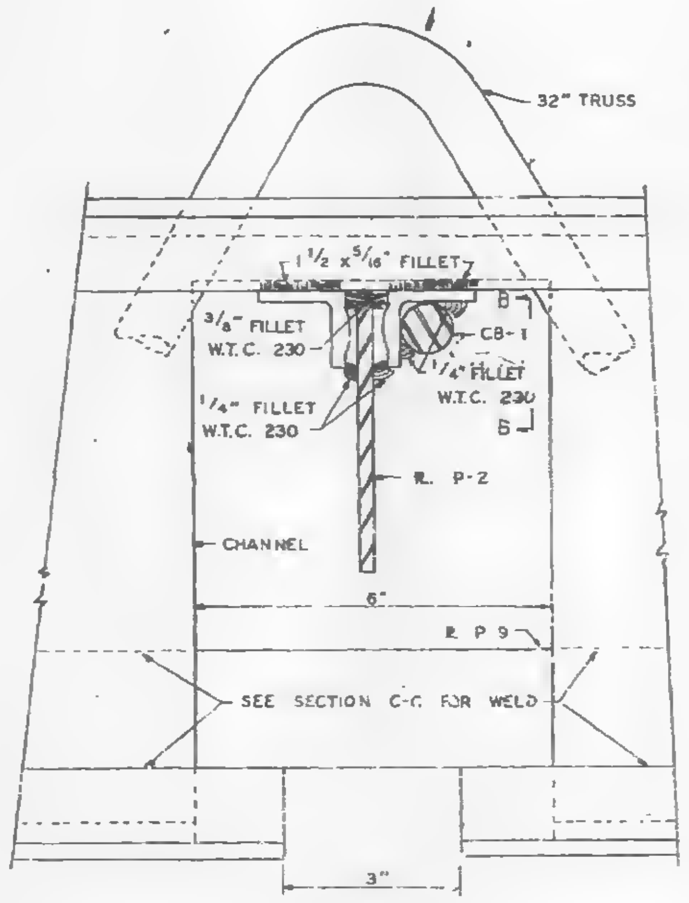
SECTION D-D


1 1/2" x 5/16" FILLET W.T.C. 223
32" TRUSS
1/4" FILLET W.T.C. 230
CB1
BRIDGING TRUSS
1/4" + GAP FILLET W.T.C. 230
1/4" + GAP FILLET W.T.C. 230
P-2

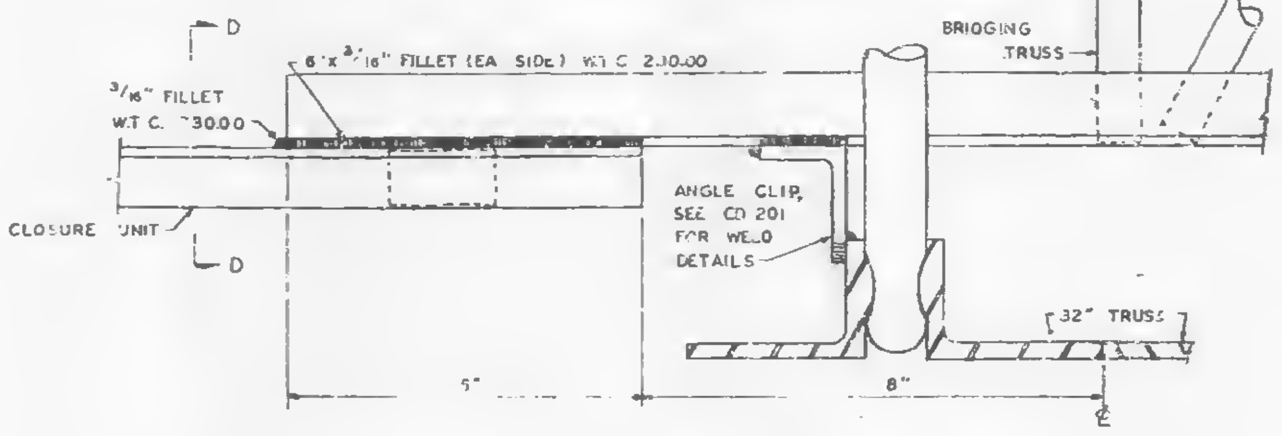
⚠1 SECTION E-E



DETAIL "A"



SECTION A-A


D
6"x 3/16" FILLET (EA SIDE) W.T.C. 230.00
BRIDGING TRUSS
3/16" FILLET W.T.C. 230.00
CLOSURE UNIT
ANGLE CLIP, SEE CD 201 FOR WELD DETAILS
D
32" TRUSS
5"
8"

INTERIOR CONNECTION OF CLOSURE UNIT TO BRIDGING TRUSS

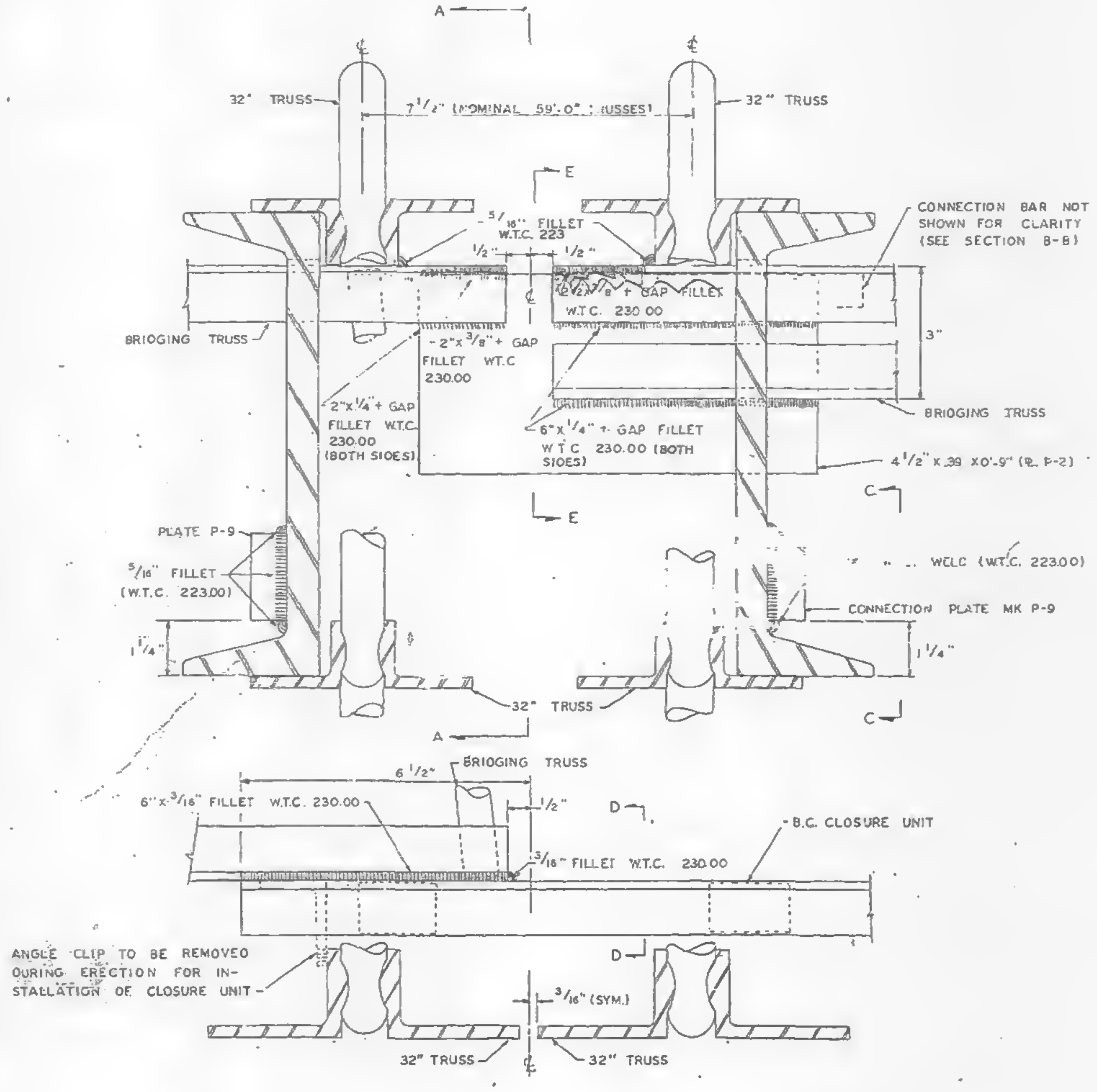
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS OTHERWISE NOTED ALL ARC WELDS MADE BY W.T.C. 223.
ALL PLATES & ø SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92
SEE DETAIL "A", THIS SHEET, FOR +GAP WELDS.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 11-X FLOORS 25-59-92

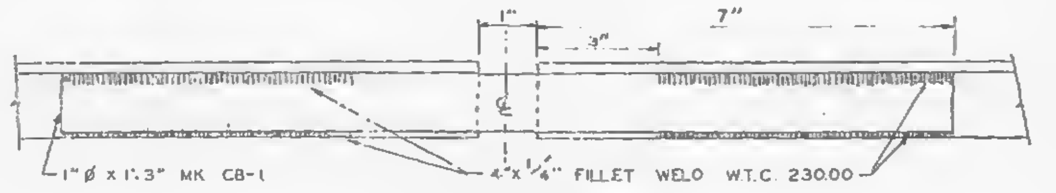
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A84 17.7
PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE 12/6/68
DRAWN BY: [illegible] DATE: 10-29-68
APPROVED FOR [illegible] BY LACLEDE STEEL CO. DATE
CHECKED BY: T.N. CHURA DATE: 10-29-68
IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER
FABRICATION CONT. NO. W.T.C 221
SHEET NO. CD 214

NO	DATE	REVISION	BY
⚠1	11-21-68	AS NOTED	G.D.C.

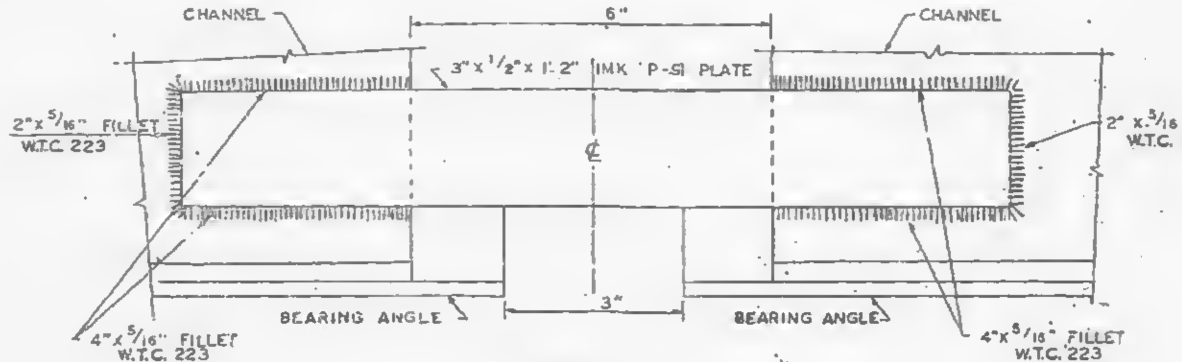

A
℄
32" TRUSS
7 1/2" (NOMINAL 59'-0" ; USSES)
32" TRUSS
E
5/16" FILLET W.T.C. 223
1/2"
1/2"
CONNECTION BAR NOT SHOWN FOR CLARITY (SEE SECTION B-B)
2"x3/8" + GAP FILLET W.T.C. 230.00
BRIDGING TRUSS
3"
2"x3/8" + GAP FILLET W.T.C 230.00
2"x1/4" + GAP FILLET W.T.C 230.00 (BOTH SIDES)
6"x1/4" + GAP FILLET W.T.C 230.00 (BOTH SIDES)
BRIDGING TRUSS
4 1/2" x.39 x0'-9" (℞ P-2)
E
C
PLATE P-9
5/16" FILLET (W.T.C. 223.00)
WELD (W.T.C. 223.00)
CONNECTION PLATE MK P-9
1 1/4"
1 1/4"
32" TRUSS
C
A
6 1/2"
BRIDGING TRUSS
6"x3/16" FILLET W.T.C. 230.00
1/2"
D
B.C. CLOSURE UNIT
3/16" FILLET W.T.C. 230.00
ANGLE CLIP TO BE REMOVED DURING ERECTION FOR INSTALLATION OF CLOSURE UNIT
D
3/16" (SYM.)
32" TRUSS
℄
32" TRUSS

PANEL JOINT BRIDGING TRUSS CONNECTION (II·X)

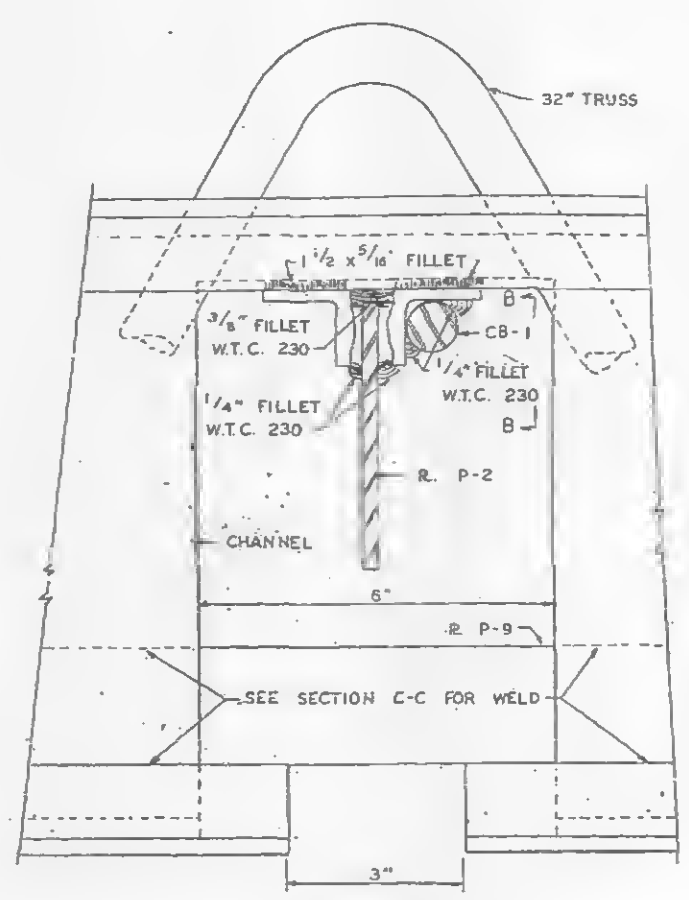
24T15A TO 24T16B
24T15A TO 24T16C



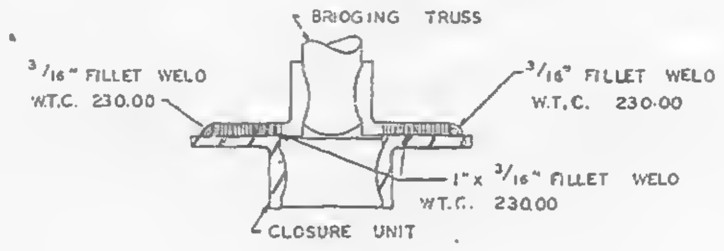
SECTION B-B


CHANNEL
6"
CHANNEL
3"x1/2"x1'-2" MK P-51 PLATE
2"x5/16" FILLET W.T.C. 223
℄
2"x5/16" FILLET W.T.C. 223
BEARING ANGLE
3"
BEARING ANGLE
4"x5/16" FILLET W.T.C. 223
4"x5/16" FILLET W.T.C. 223

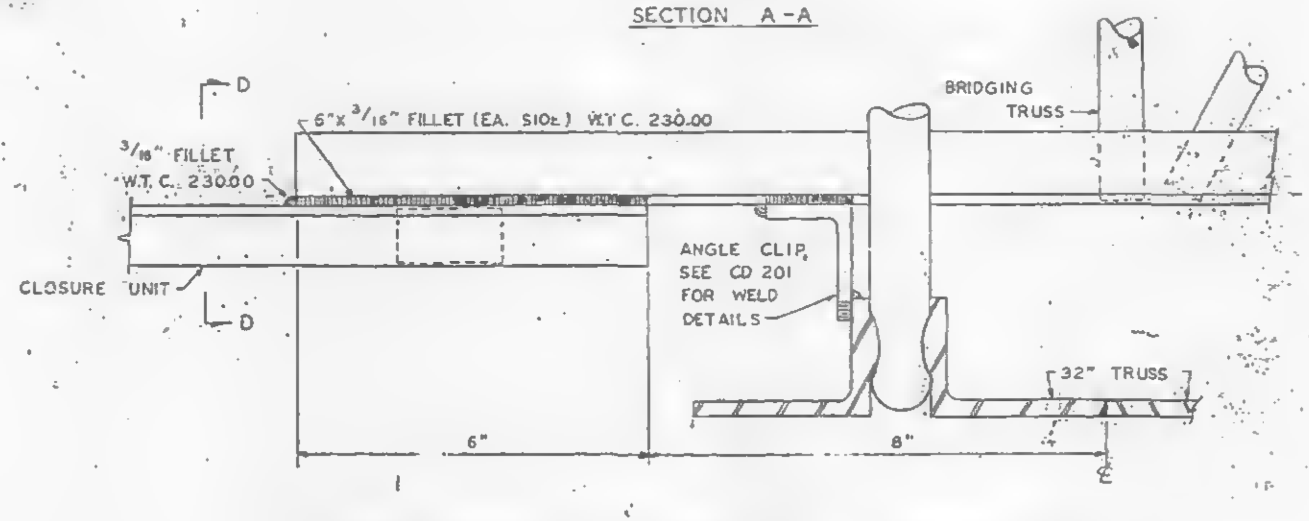
SECTION C-C



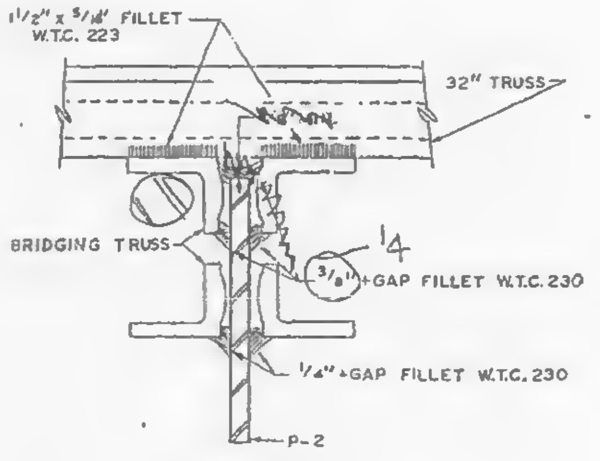
SECTION A-A


BRIDGING TRUSS
3/16" FILLET WELD W.T.C. 230.00
3/16" FILLET WELD W.T.C. 230.00
1"x3/16" FILLET WELD W.T.C. 230.00
CLOSURE UNIT

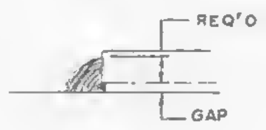
SECTION D-D


D
6"x3/16" FILLET (EA. SIDE) W.T.C. 230.00
BRIDGING TRUSS
3/16" FILLET W.T.C. 230.00
CLOSURE UNIT
D
ANGLE CLIP, SEE CD 201 FOR WELD DETAILS
32" TRUSS
6"
8"
℄

INTERIOR CONNECTION OF CLOSURE UNIT TO BRIDGING TRUSS


1 1/2" x 5/16" FILLET W.T.C. 223
32" TRUSS
BRIDGING TRUSS
1/4
3/8" + GAP FILLET W.T.C. 230
1/4" + GAP FILLET W.T.C. 230
P-2

SECTION E-E



DETAIL "A"

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS OTHERWISE NOTED ALL ARC WELDS MADE BY W.T.C. 223.
ALL PLATES & ⌀ SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.
SEE DETAIL "A", THIS SHEET, FOR +GAP WELDS.

SKILLING · HELLE
CHRISTIANSEN · ROBERTSON
St & Civil Engineers
X
11|15|68 SK

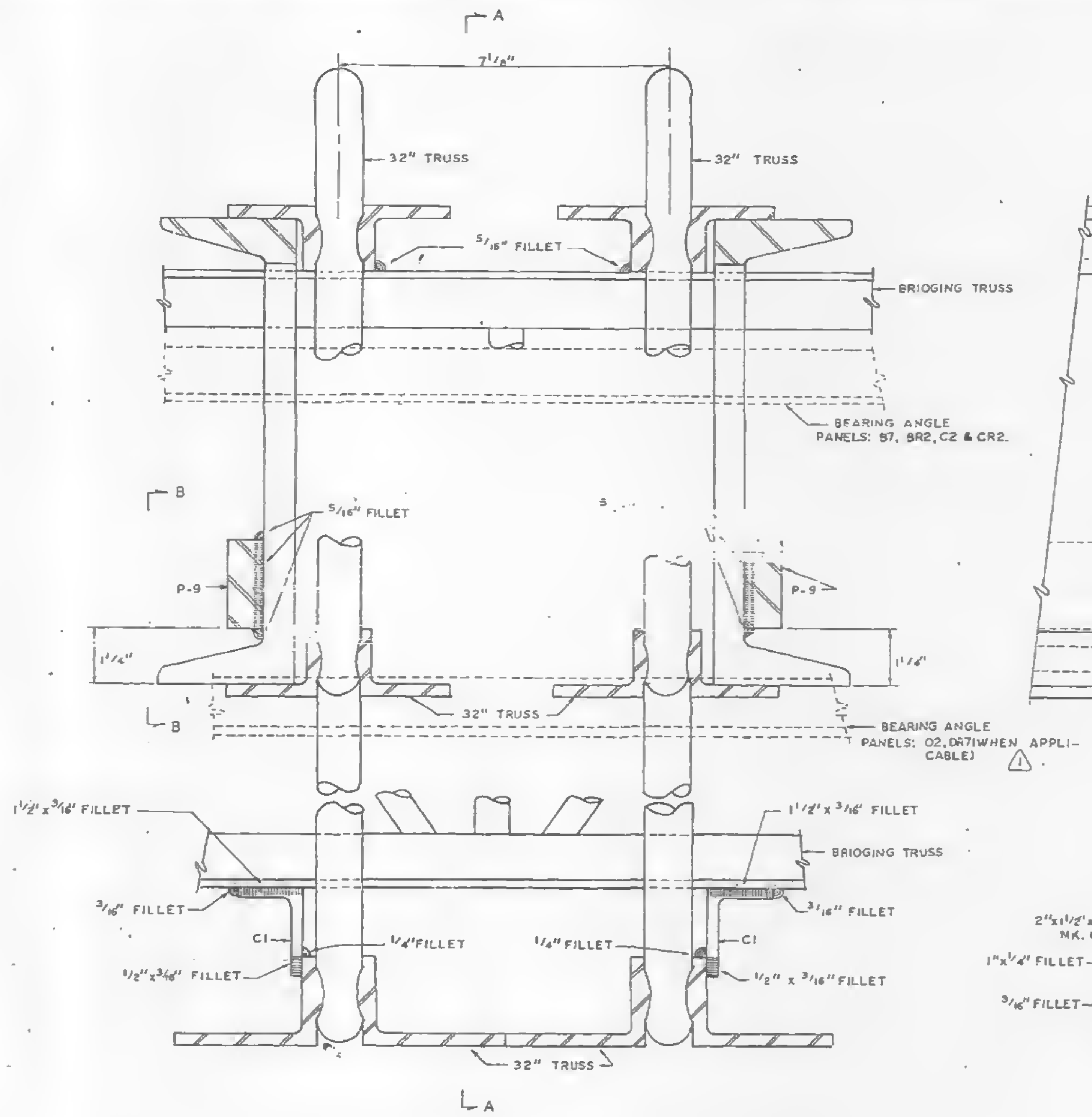
NO	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL II-X FLOORS 25-59-92

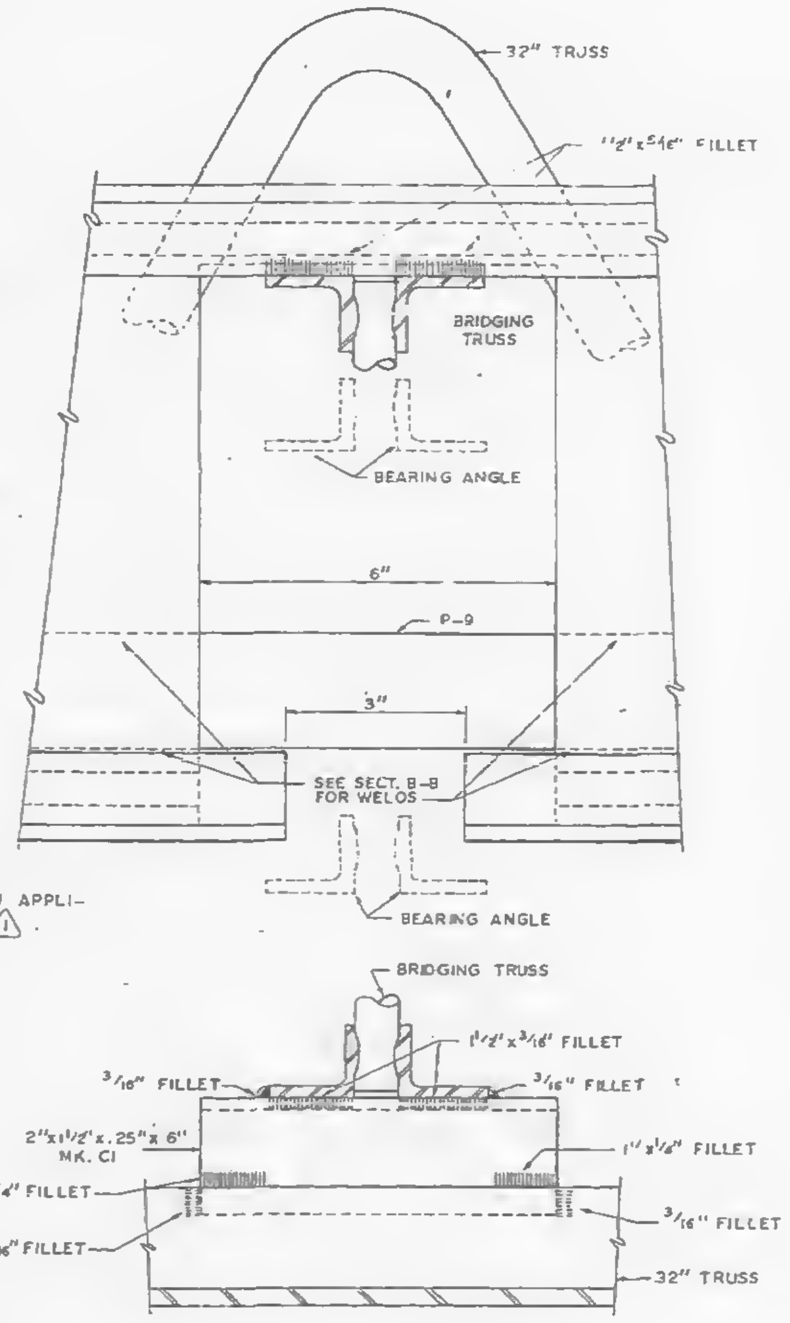
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB4-17.7	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: DATE: 10-25-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T M CHURA DATE: 10-28-68	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C 221	SHEET NO CD 214

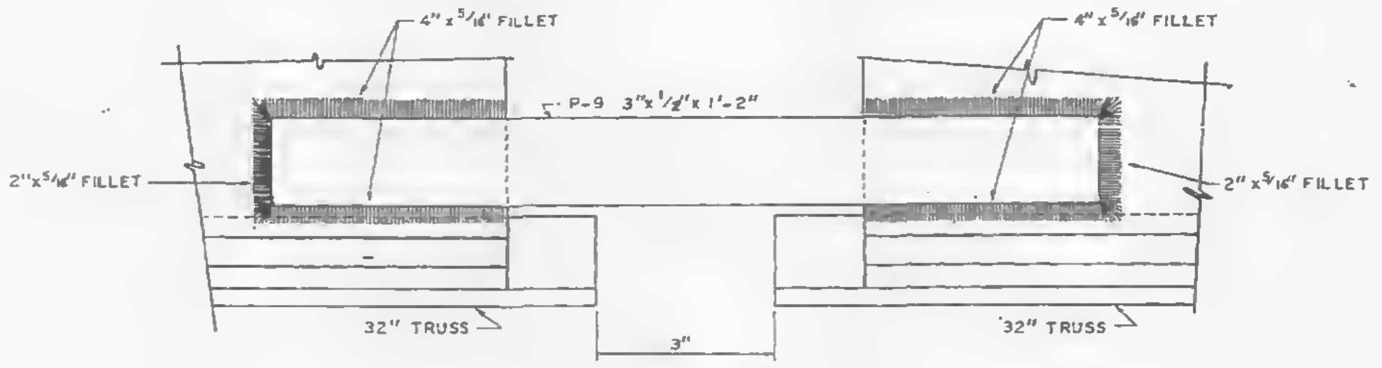


INTERIOR BRIDGING TRUSS CONNECTION (4-X)

PANELS: A2, B2, BR2, B7, BR7, C2, CR2, D2, DR2, O7, OR7, E2 & ER2. ⚠2



SECTION A-A



SECTION B-B

(BEARING ANGLE FOR PANELS O2 & OR7 NOT SHOWN FOR CLARITY) ⚠1

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

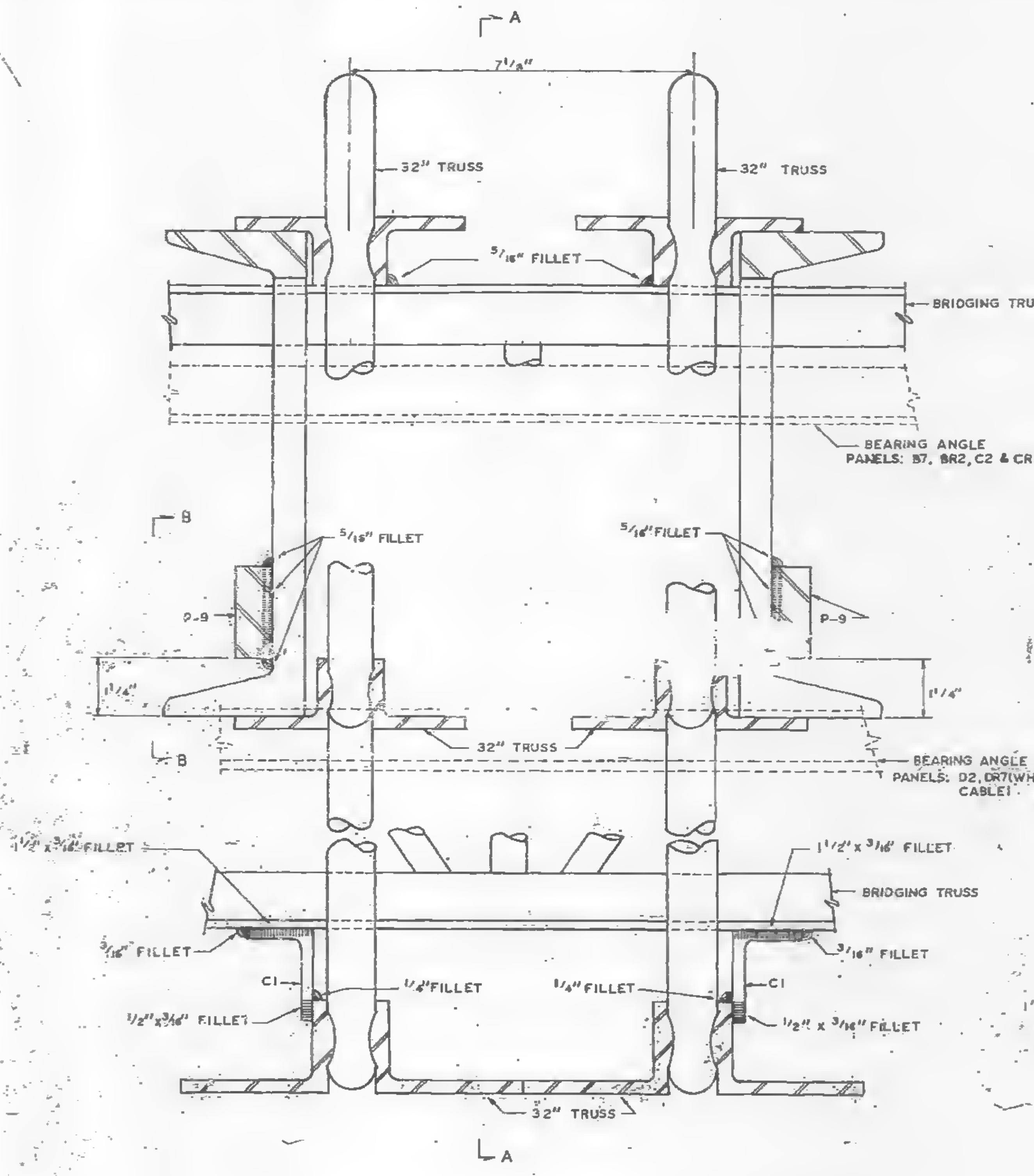
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-X FOR FLOORS 25, 59 & 92
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

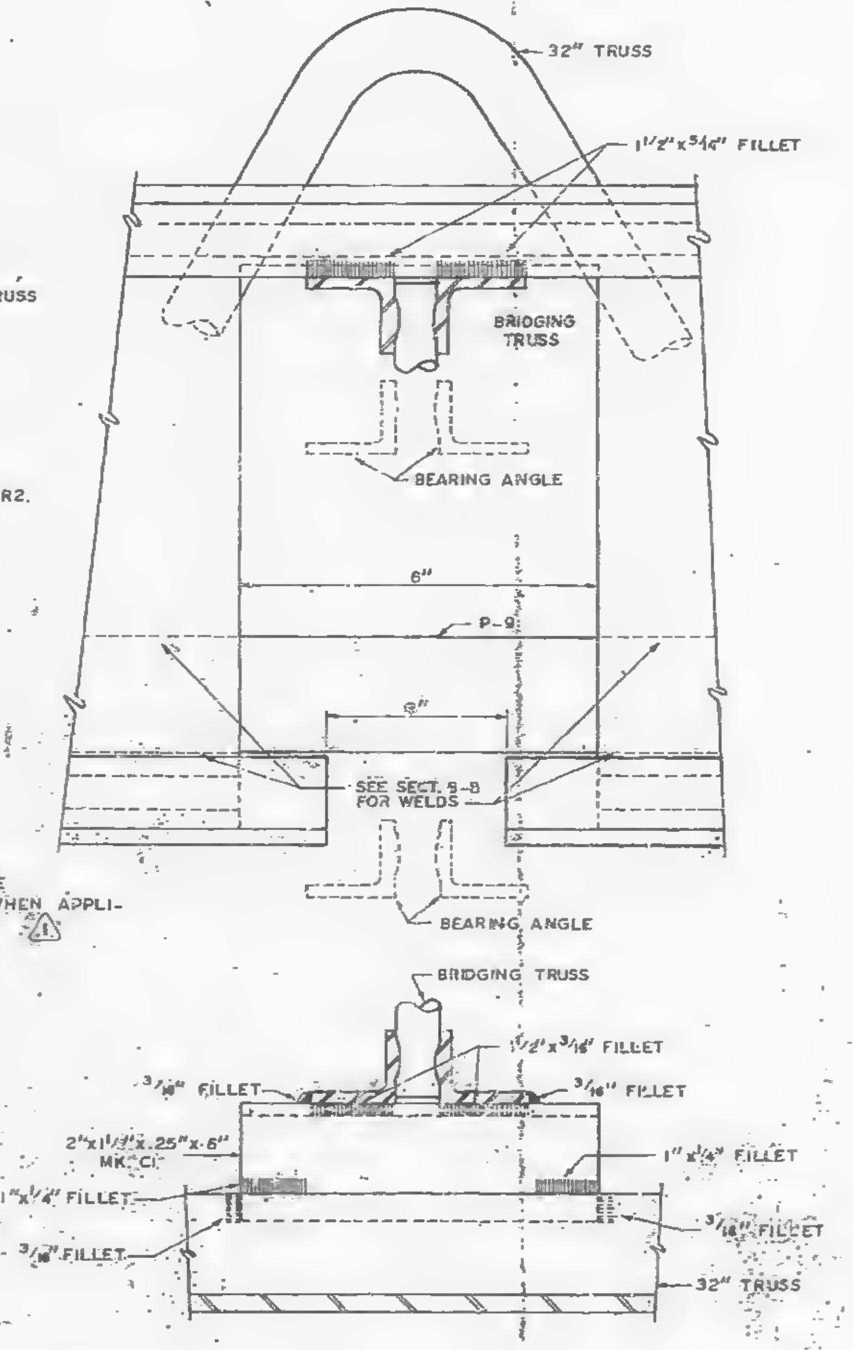
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-A84-17	PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A. — DATE 1/31/69	DRAWN BY: G.O.C. DATE NOV. 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR — DATE	CHECKED BY: T.M.CHURA DATE NOV. 4, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 215

NO.	DATE	REVISION	BY
⚠2	1-9-69	AS NOTED	G.D.C.
⚠1	11-21-68	AS NOTED	G.D.C.

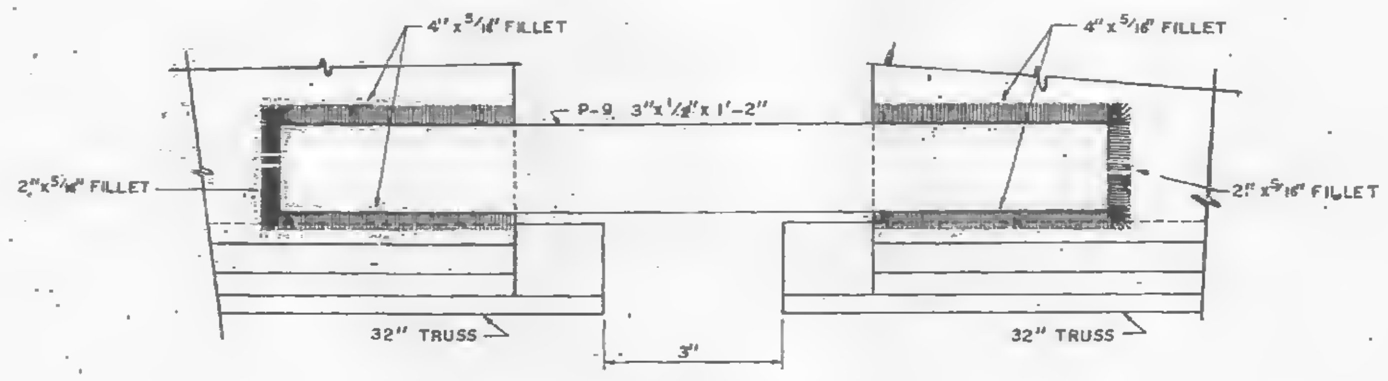


INTERIOR BRIDGING TRUSS CONNECTION (4-X)

PANELS: A2, B2, BR2, B7, BR7, C2, CR2, DR2, D7, DR7, E2 & ER2.



SECTION A-A



SECTION B-B

(BEARING ANGLE FOR PANELS D2 & DR7 NOT SHOWN FOR CLARITY) 1

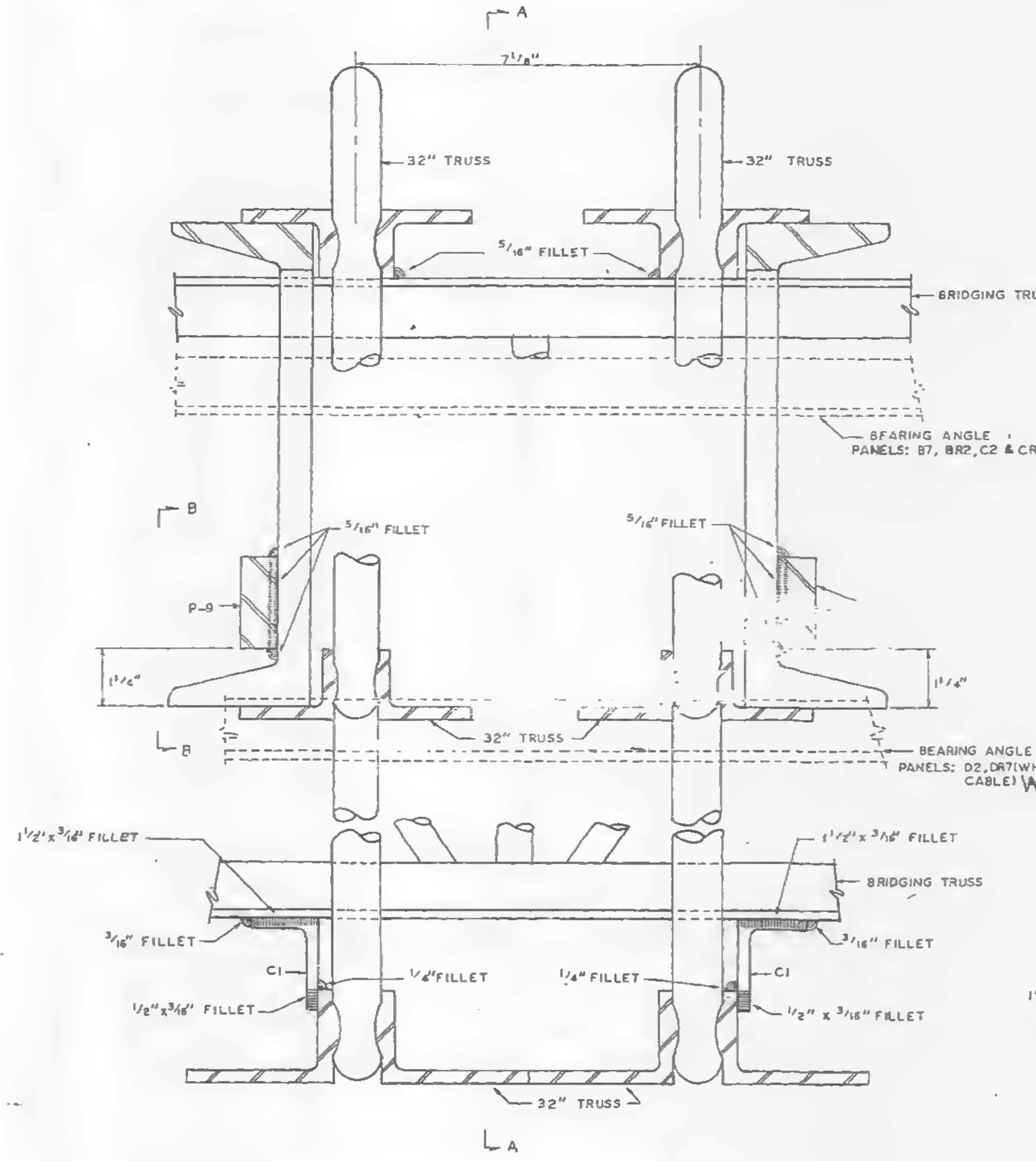
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-X FOR FLOORS 25, 59 & 92
WORLD TRADE CENTER TOWERS A & B

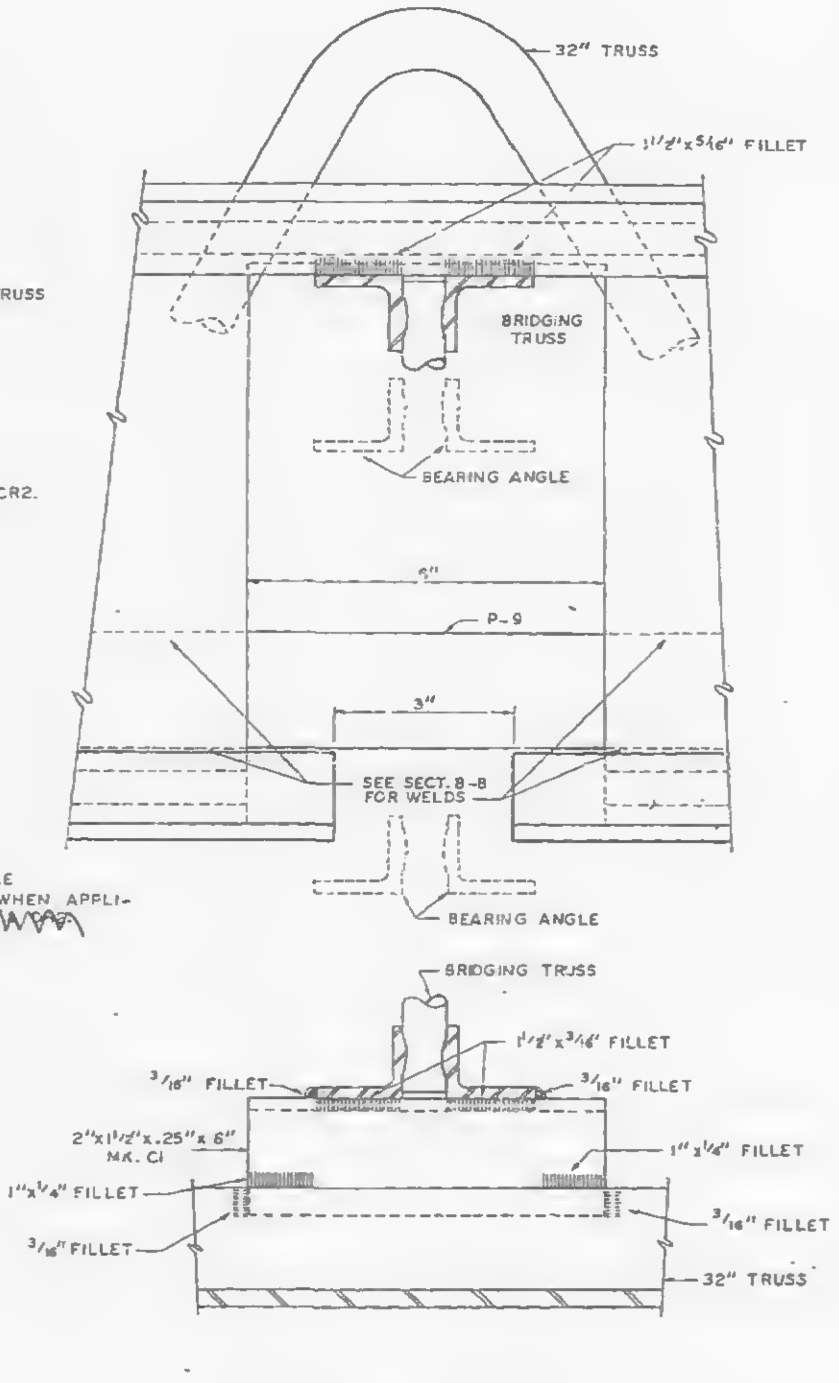
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB4-17
PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A. BY: James W. Cte DATE 12/6/68
DRAWN BY: G.D.C. DATE NOV. 4, 1968
APPROVED FOR FABRICATION BY: LACLEDE STEEL CO. DATE
CHECKED BY: T.M.CHURA DATE NOV. 4, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 215

NO.	DATE	REVISION	BY
1	11-21-68	AS NOTED	G.D.C.

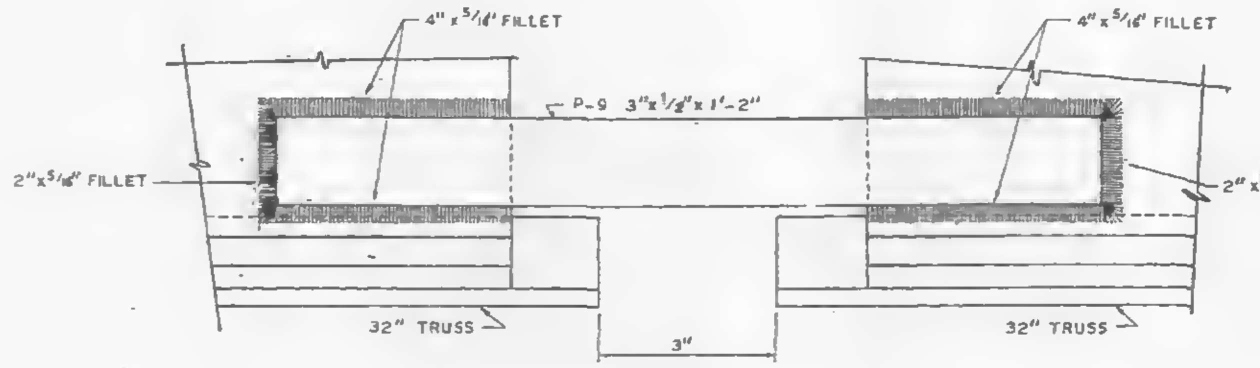


INTERIOR BRIDGING TRUSS CONNECTION (4-X)

PANELS: A2, B2, BR2, B7, BR7, C2, CR2, DR2, D7, DR7, E2 & ER2.



SECTION A-A



SECTION B-B

(BEARING ANGLE FOR PANELS D2, [illegible] & DR7 NOT SHOWN FOR CLARITY)

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

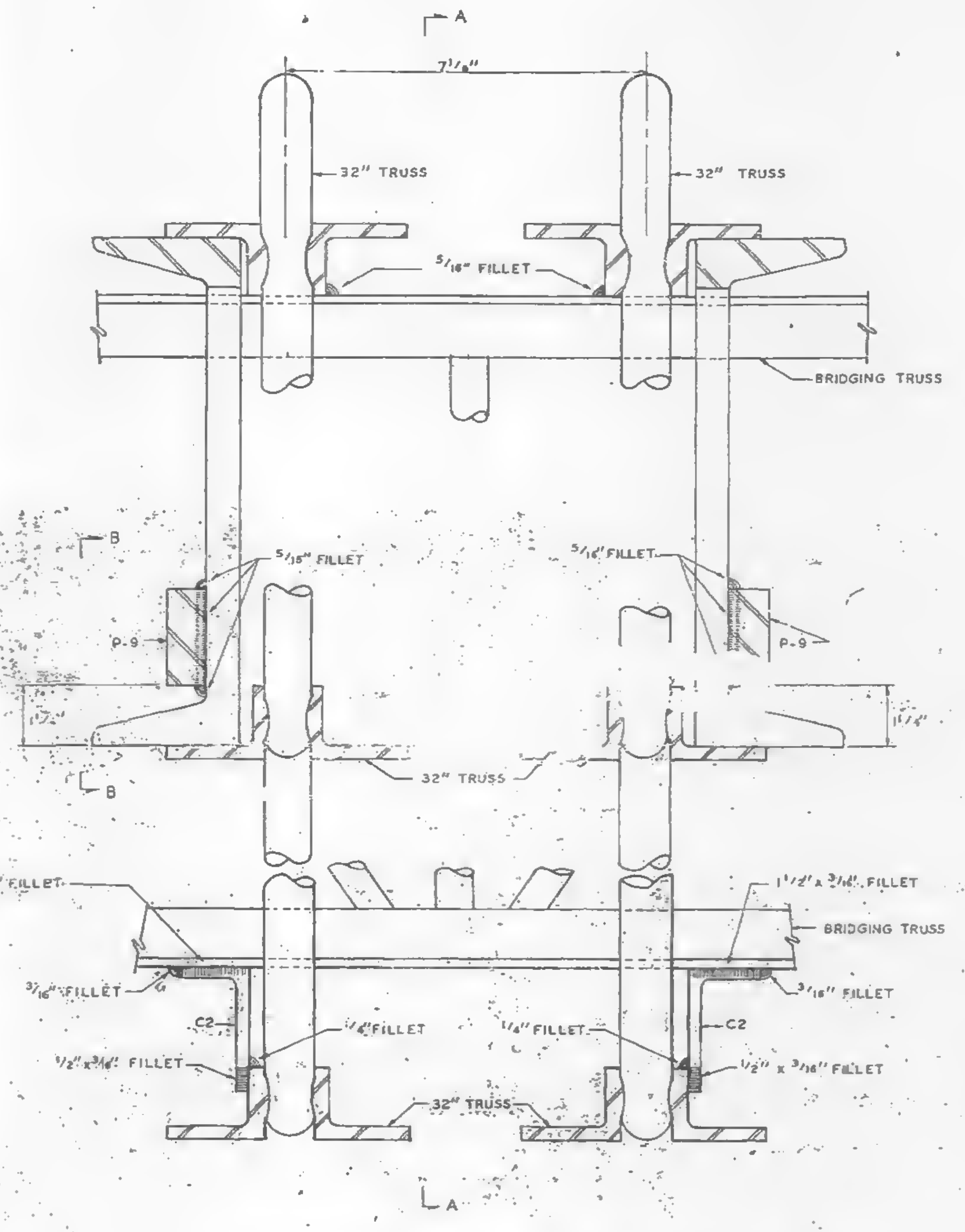
SKILLING-HELLE
CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
X
11 15 68 SK

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-X FOR FLOORS 25, 59 & 92
WORLD TRADE CENTER TOWERS A & B

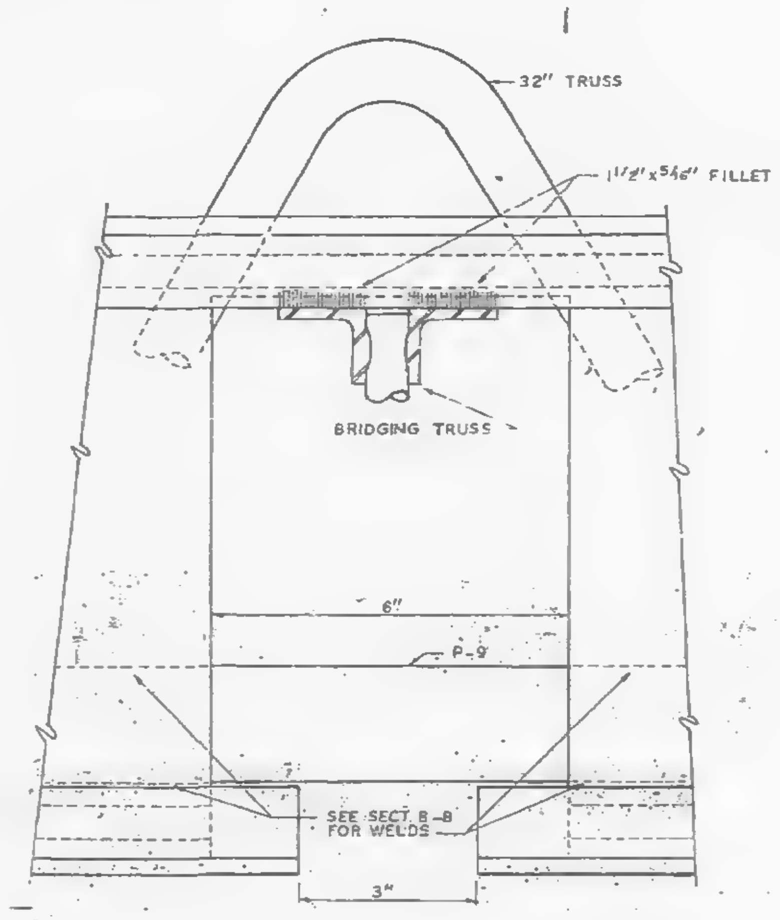
FABRICATION BY: LACLEDE STEEL COMPANY

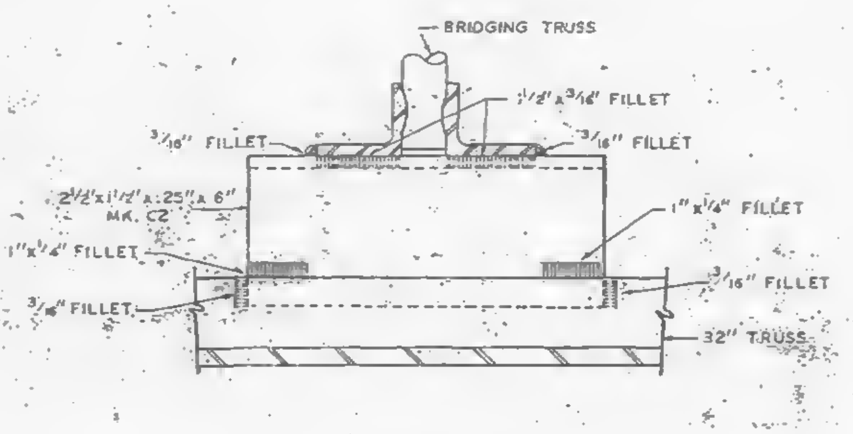
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-17	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: G.D.C. DATE NOV. 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD 215



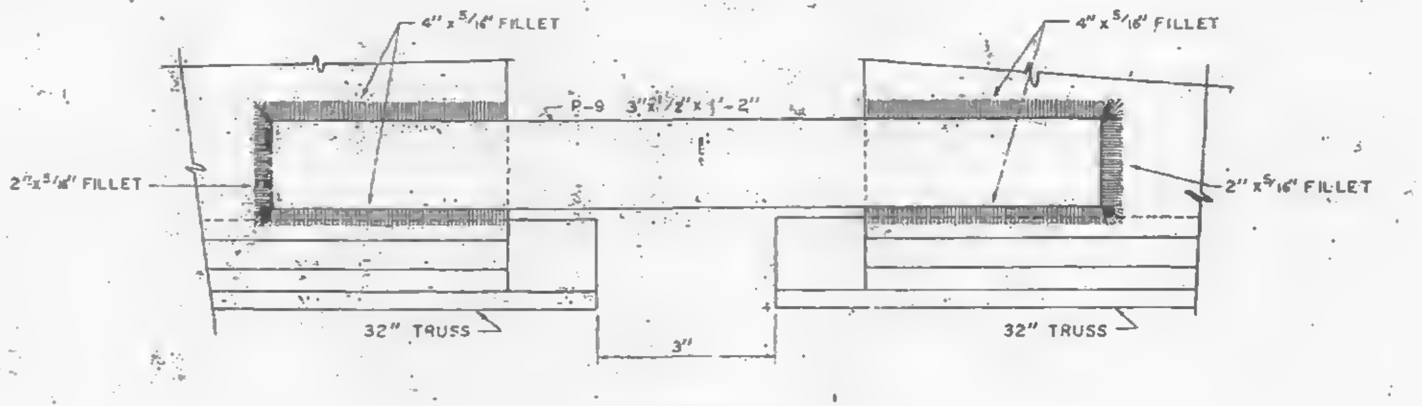
INTERIOR BRIDGING TRUSS CONNECTION (4-XA)

PANELS: F2 & FR2





SECTION A-A



SECTION B-B

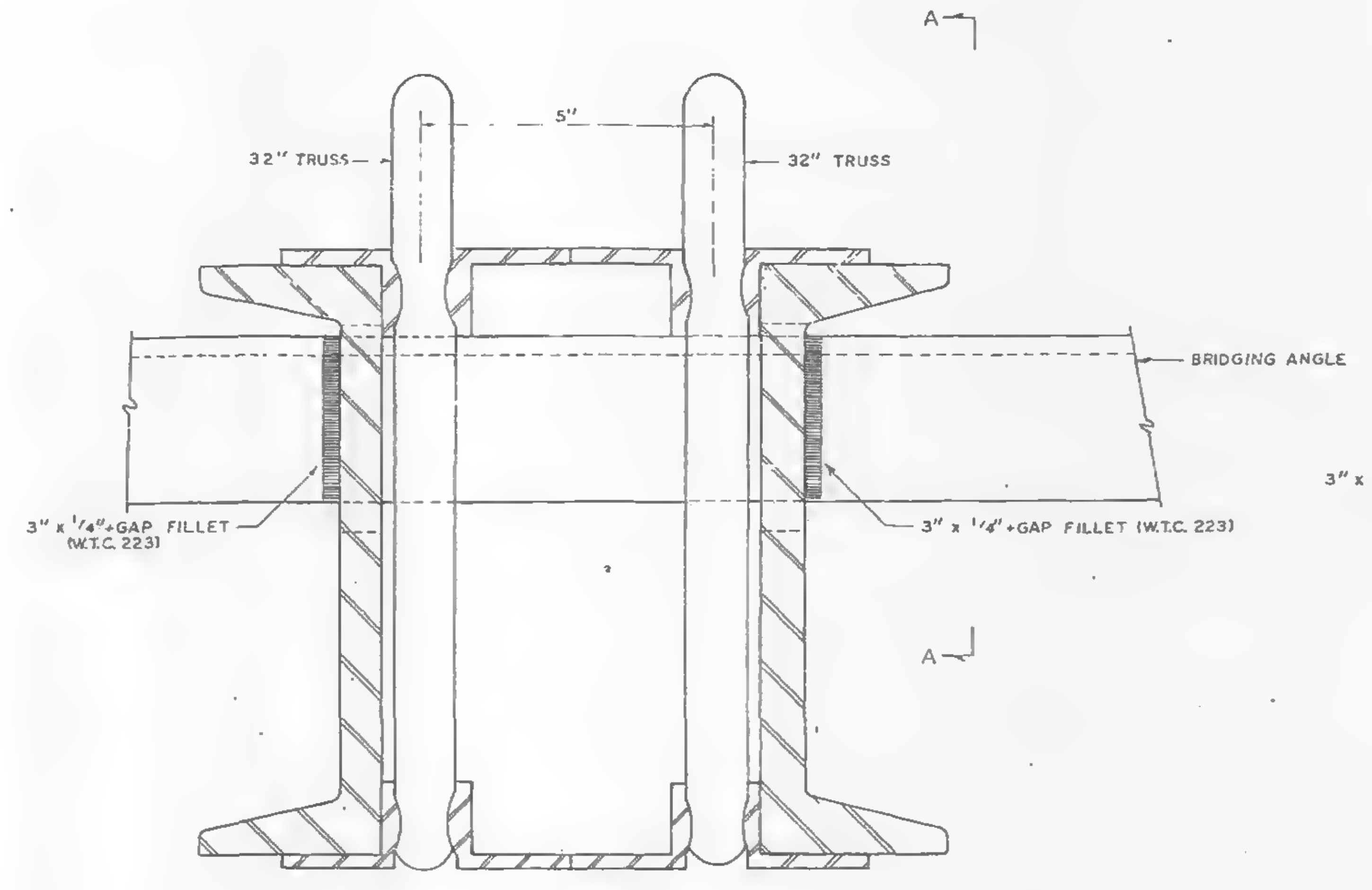
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-7D SERIES OR EQUAL.
ALL PLATES TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-XA FOR FLOORS 25, 59 & 92
WORLD TRADE CENTER TOWERS A & B

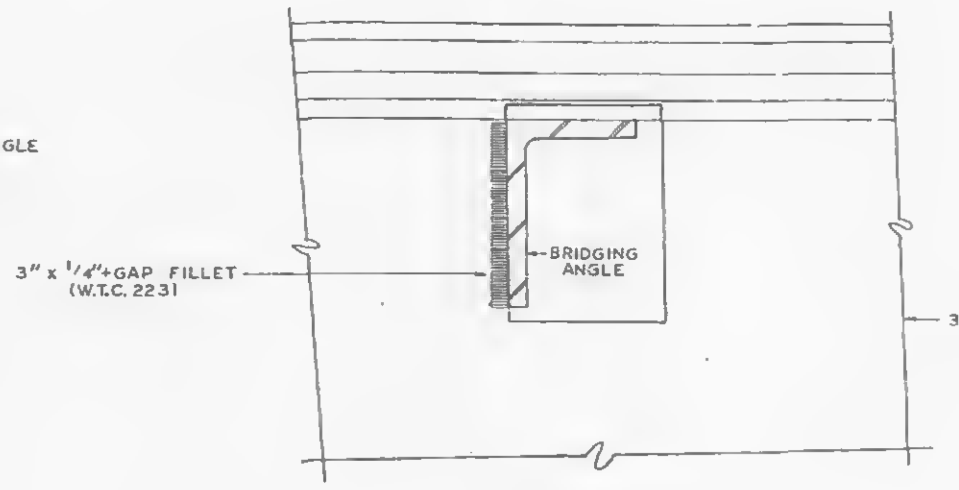
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-17	PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A.	DATE 12/19/68	DRAWN BY: G.D.C. DATE NOV 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 216

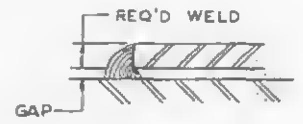

A
5"
32" TRUSS
32" TRUSS
BRIDGING ANGLE
3" x 1/4"+GAP FILLET (W.T.C. 223)
3" x 1/4"+GAP FILLET (W.T.C. 223)
A

INTERIOR BRIDGING ANGLE CONNECTION 1-XA △2

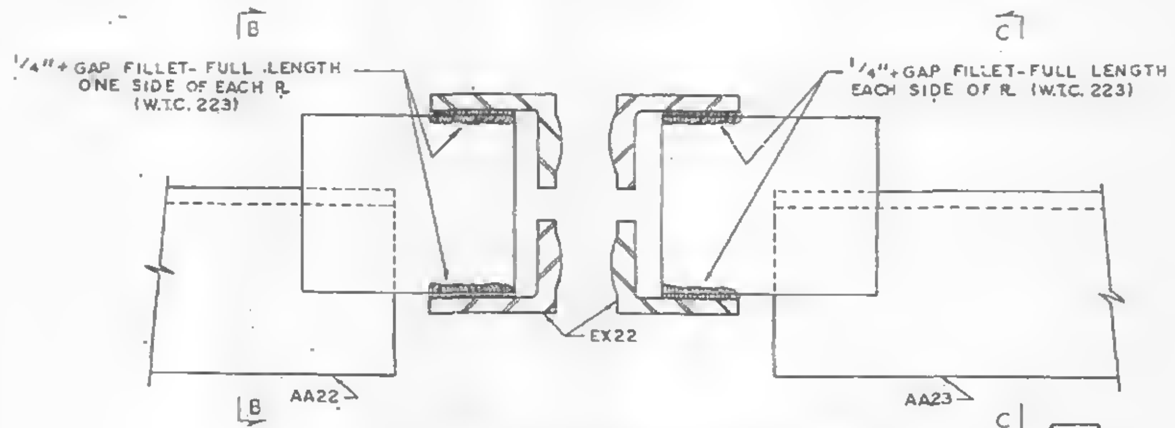
△2 PANELS: J2, H2, H7, HR2, HR7, G2 & GR2.



SECTION A-A



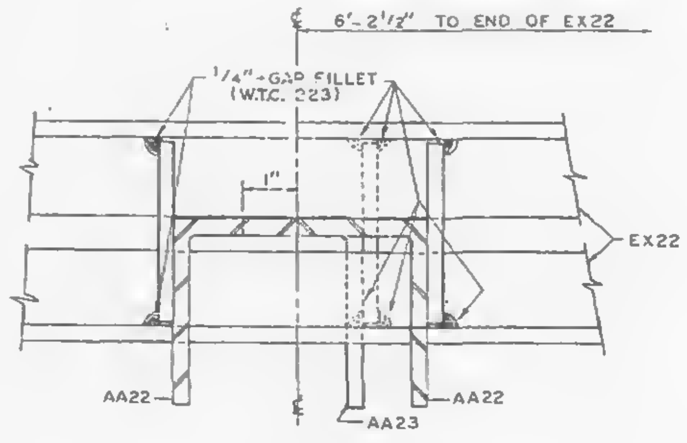
DETAIL "A"


B
C
1/4"+GAP FILLET- FULL LENGTH ONE SIDE OF EACH PL (W.T.C. 223)
1/4"+GAP FILLET-FULL LENGTH EACH SIDE OF PL (W.T.C. 223)
EX22
AA22
AA23
B
C

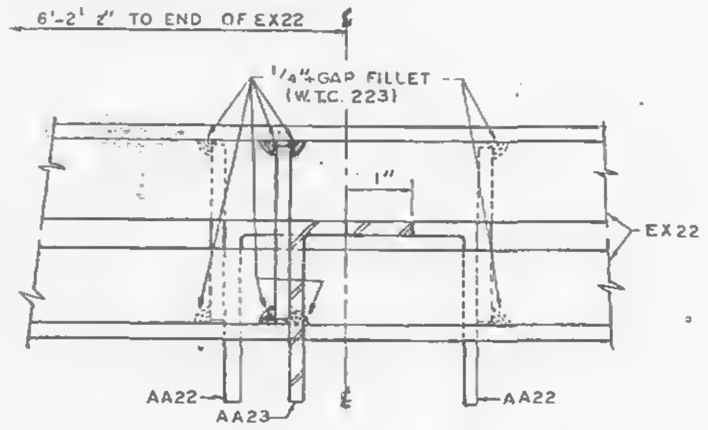
INTERIOR BRIDGING ANGLE CONNECTION 3-XB

PANELS: F2 & FR2*

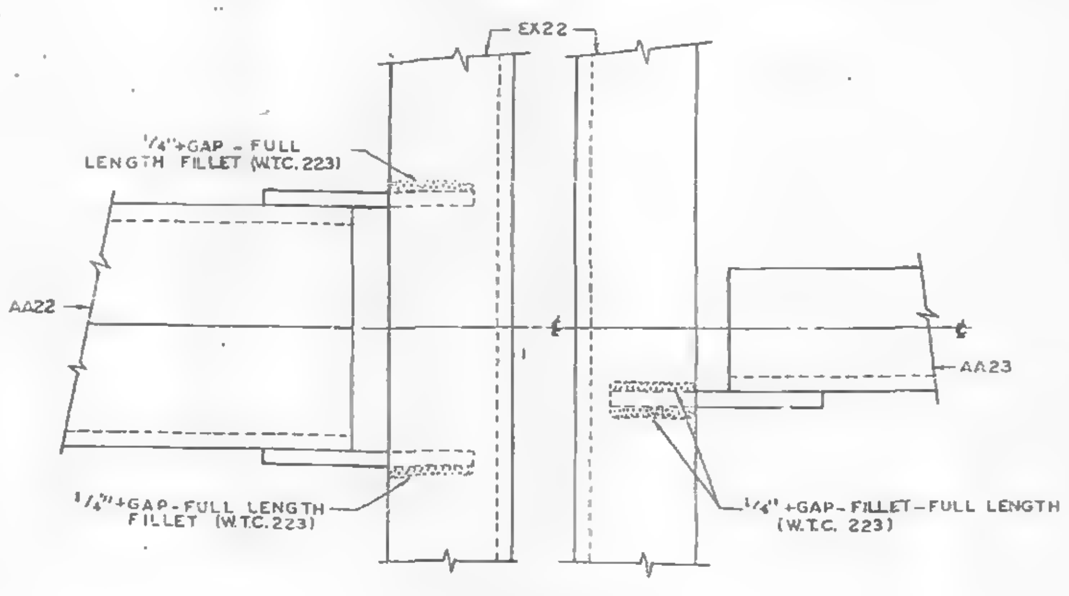
△2



SECTION B-B △2



SECTION C-C △2


EX22
1/4"+GAP - FULL LENGTH FILLET (W.T.C. 223)
AA22
℄
℄
AA23
1/4"+GAP-FULL LENGTH FILLET (W.T.C. 223)
1/4"+GAP-FILLET-FULL LENGTH (W.T.C. 223)

TOP VIEW △2

* OPP. HAND FOR FR2 PANEL-AA23R REPLACES AA23.

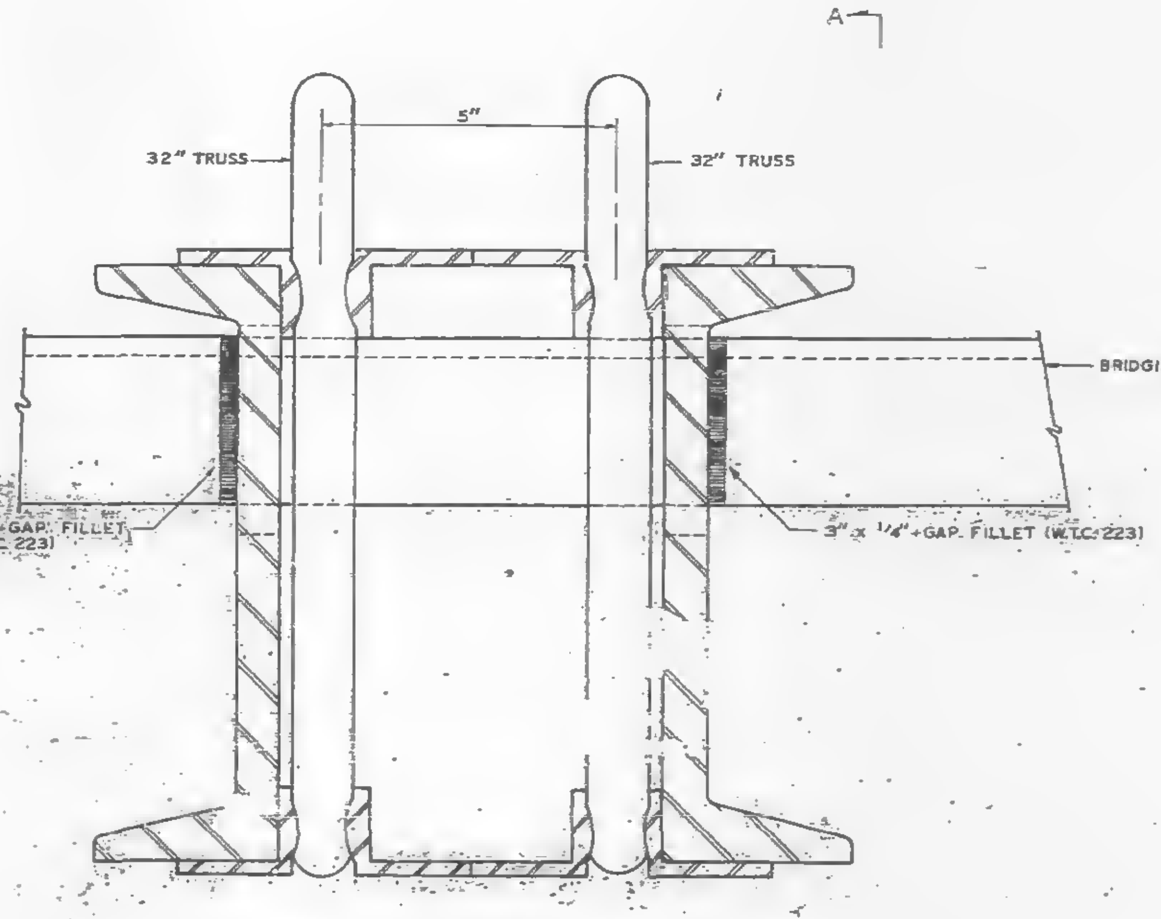
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF CONNECTIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL "A" (THIS SHEET) FOR ALL +GAP WELDS.

NO.	DATE	REVISION	BY
△2	6-20-69	AS NOTED	G.D.C.
△1	11-21-68	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

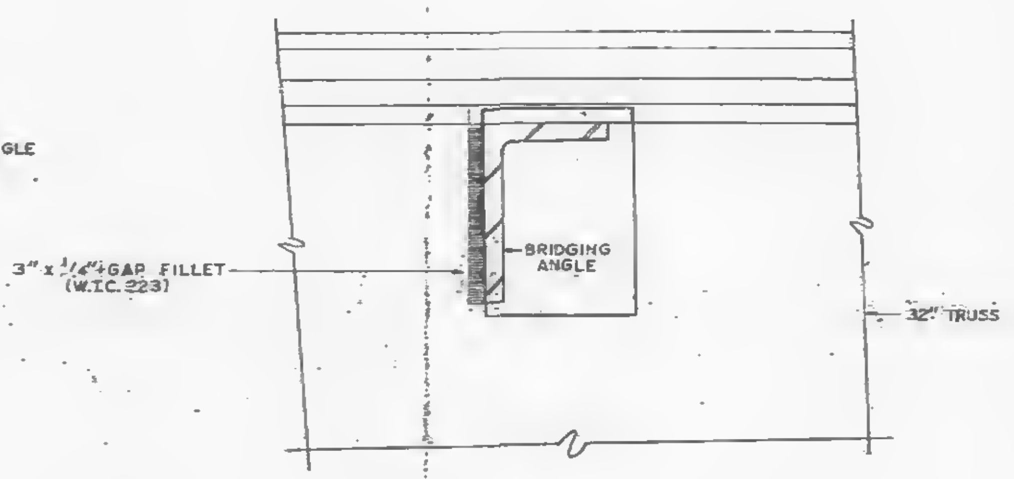
CONNECTION DETAILS 1-XA & 3-XB FOR FLOORS 25, 59 & 92. △2
WORLD TRADE CENTER TOWERS A & B.

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 7/2/69
DRAWN BY: gdc DATE NOV. 6, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE NOV. 8, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C 221
SHEET NO. CD 217

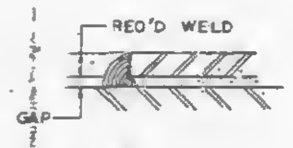

A
5"
32" TRUSS
32" TRUSS
BRIDGING ANGLE
3" x 1/4"+GAP FILLET (W.T.C. 223)
3" x 1/4"+GAP FILLET (W.T.C. 223)

INTERIOR BRIDGING ANGLE CONNECTION (3-X)

⚠1 PANELS: J2, H2, H7, HR2, HR7, G2 & GR7.
GR2



SECTION A-A



DETAIL "A"

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF CONNECTIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL "A" (THIS SHEET) FOR ALL +GAP WELDS.

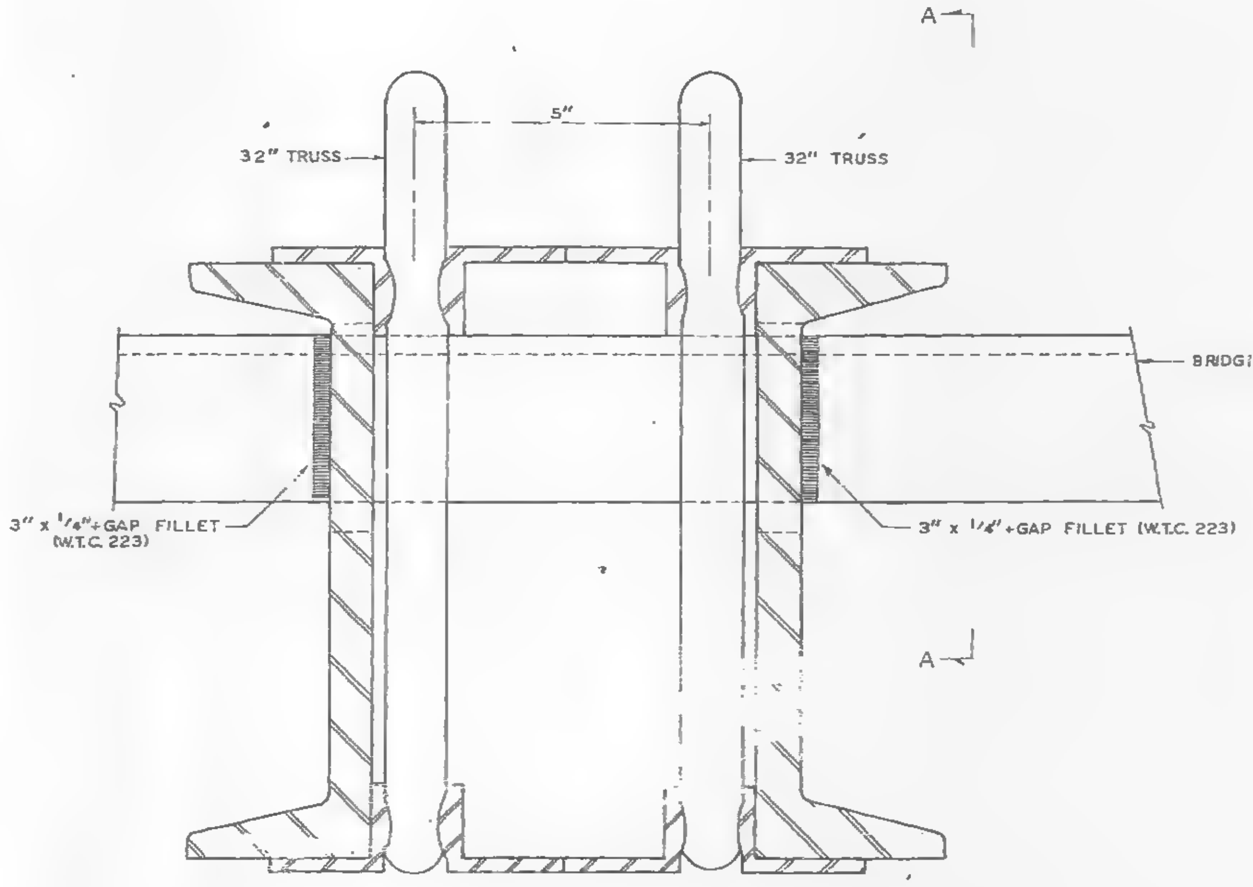
SKILLING-HELLE
CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
☐ REJECTED
Date 12/4/68 SK

NO.	DATE	REVISION	BY
⚠1	11-21-68	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 3-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B.

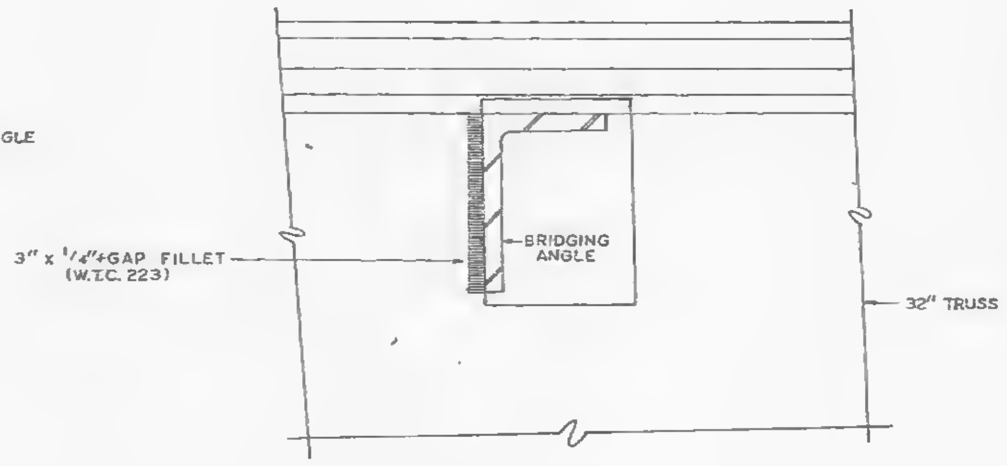
FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO.
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE
DRAWN BY: gdc DATE NOV. 6, 1968
APPROVED FOR FABRICATION BY: LACLEDE FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE NOV. 6, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 217


A
5"
32" TRUSS
32" TRUSS
BRIDGING ANGLE
3" x 1/4"+GAP FILLET (W.T.C. 223)
3" x 1/4"+GAP FILLET (W.T.C. 223)
A

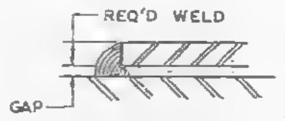
INTERIOR BRIDGING ANGLE CONNECTION ⟨3-X⟩

PANELS: J2, H7, HR2, G2, AND GR2.

H2 & HR7



SECTION A-A



DETAIL "A"

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF CONNECTIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL "A" (THIS SHEET) FOR ALL +GAP WELDS.

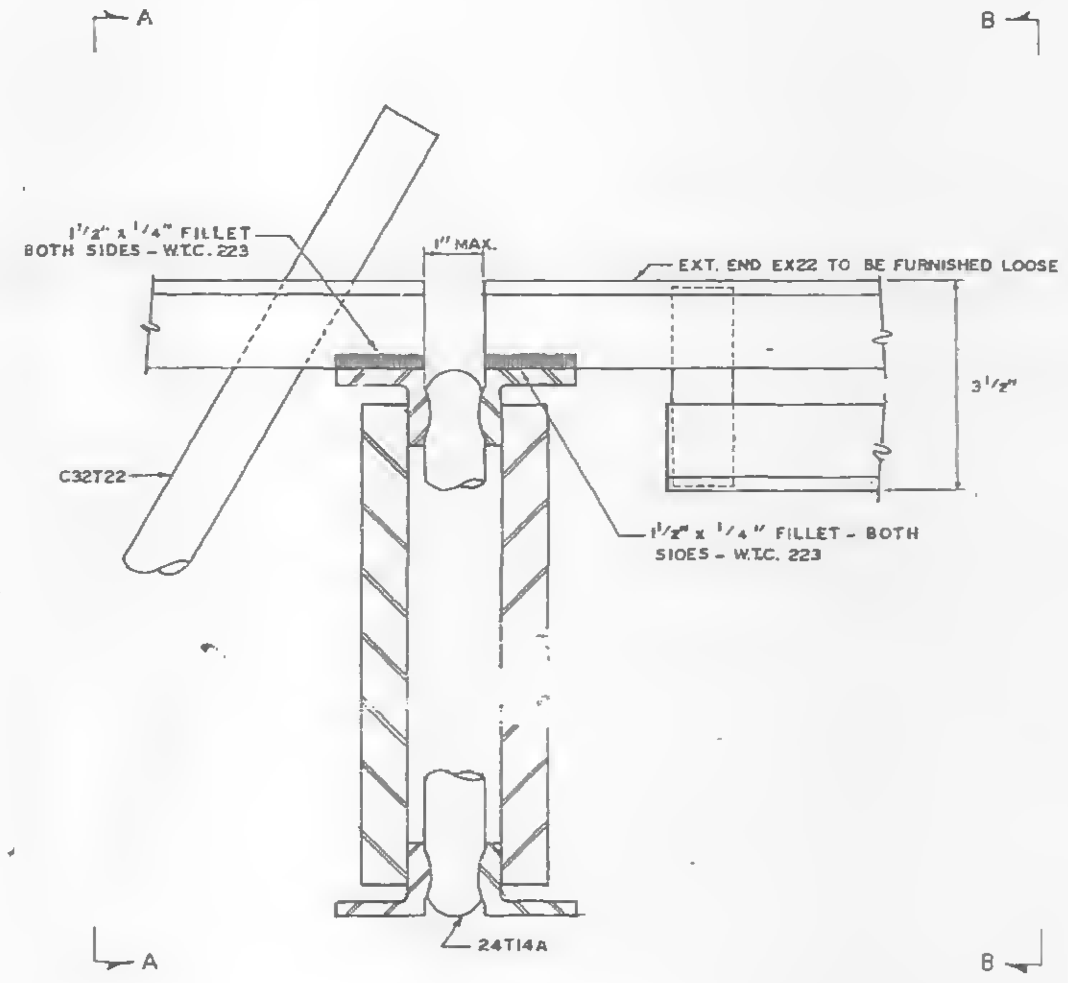
SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
X
11/15/68 SK

CONNECTION DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 3-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B.

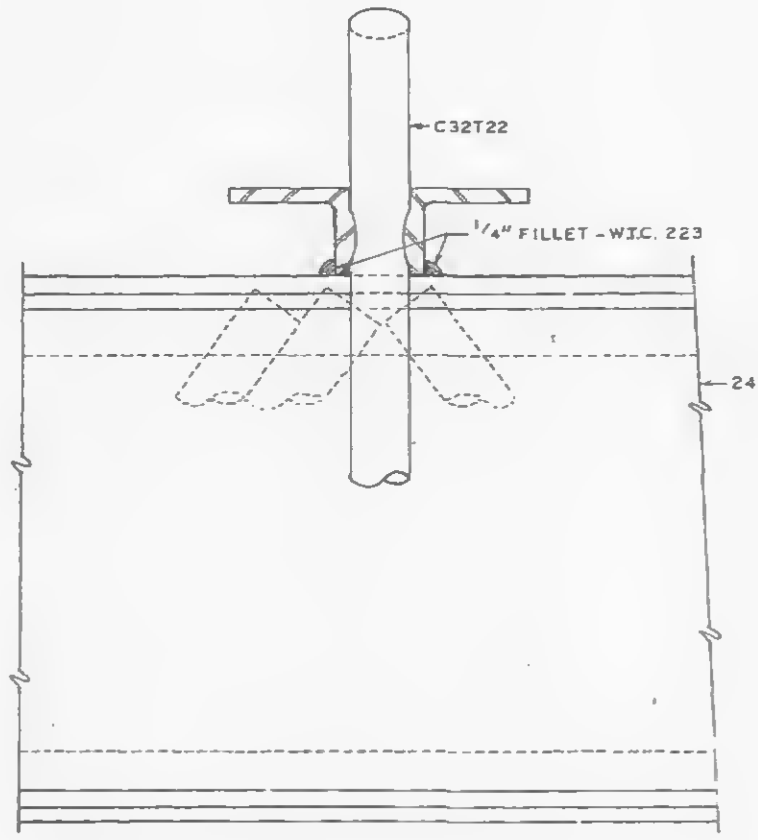
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: gdc DATE NOV. 6, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 6, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 217

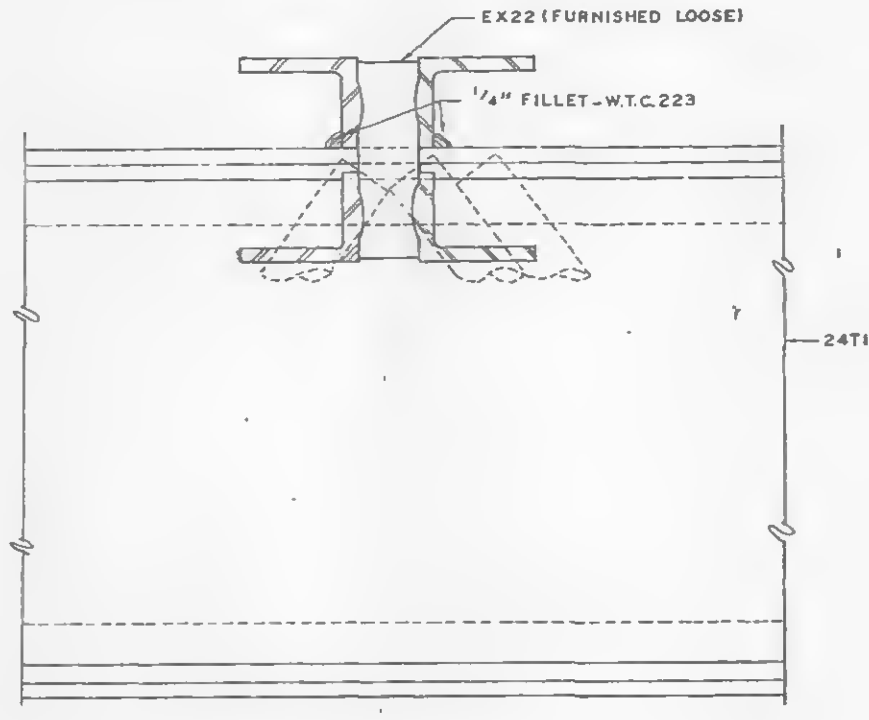

A
B
A
B
1 1/2" x 1/4" FILLET BOTH SIDES - W.T.C. 223
1" MAX.
EXT. END EX22 TO BE FURNISHED LOOSE
3 1/2"
C32T22
1 1/2" x 1/4" FILLET - BOTH SIDES - W.T.C. 223
24T14A

INTERIOR BRIDGING TRUSS CONNECTION ⟨5-X⟩

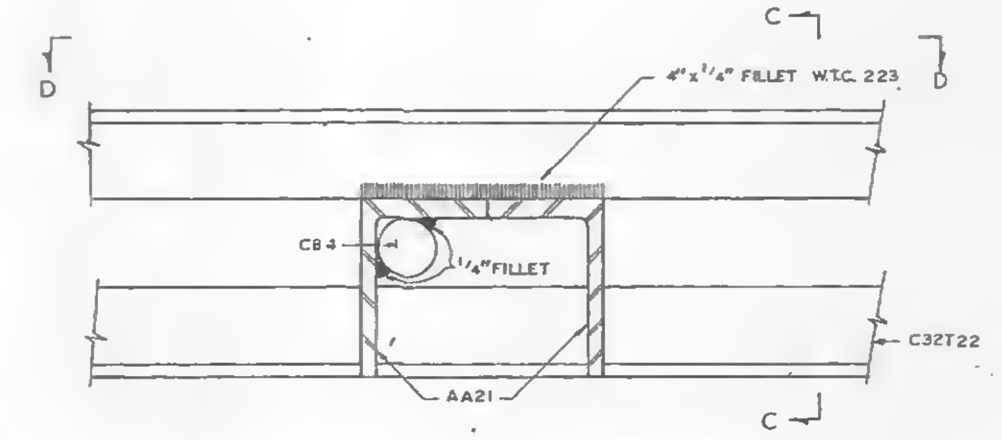
24T14A TO C32T22 IN PANELS F2 & FR2



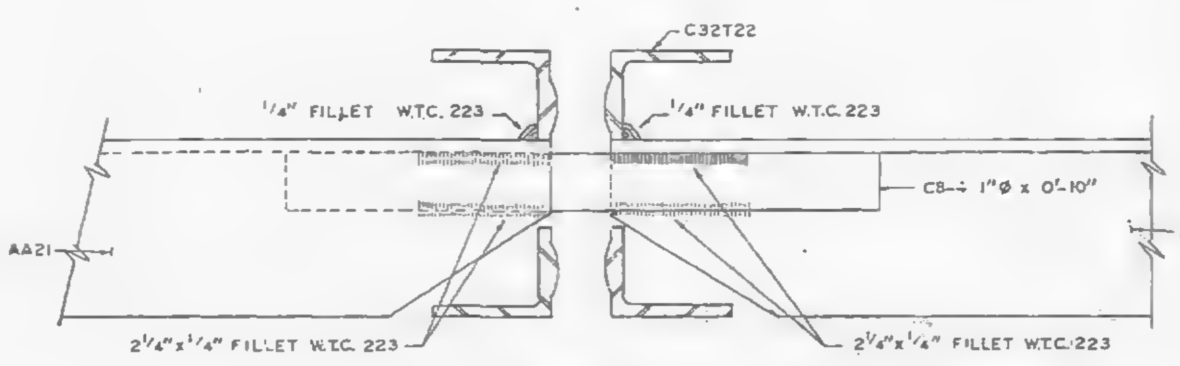
SECTION A-A



SECTION B-B



INTERIOR BRIDGING ANGLE CONNECTION ⟨3-XA⟩ △1

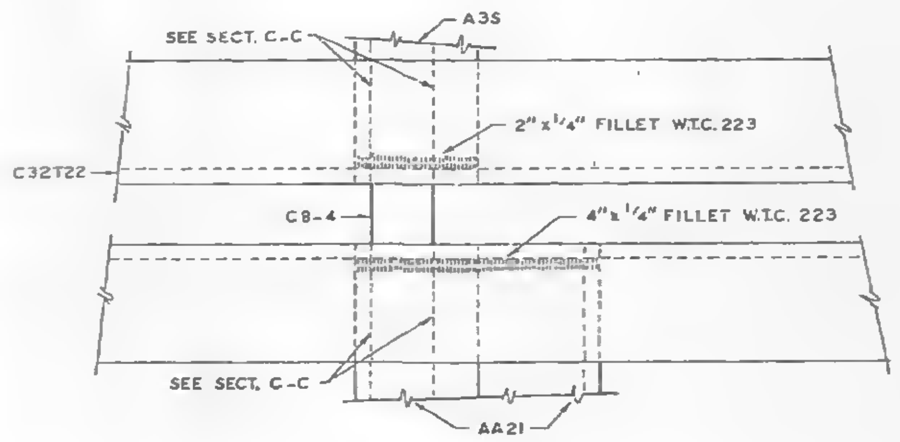


SECTION C-C

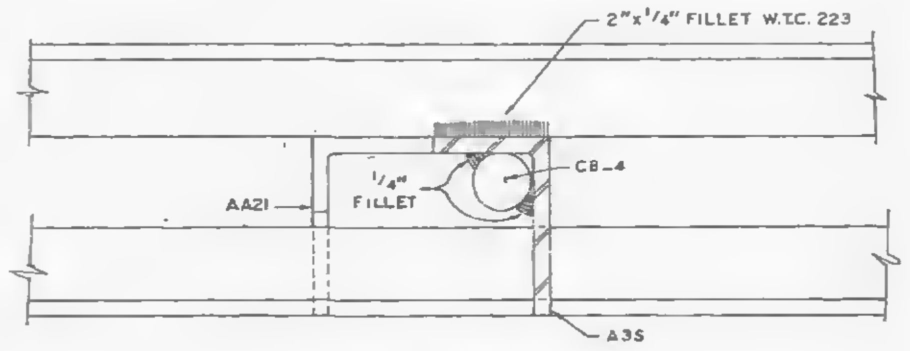
△1

△1	1-9-69	AS NOTED	G.D.C.
NO.	DATE	REVISION	BY

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.



SECTION D-D △1



SECTION E-E

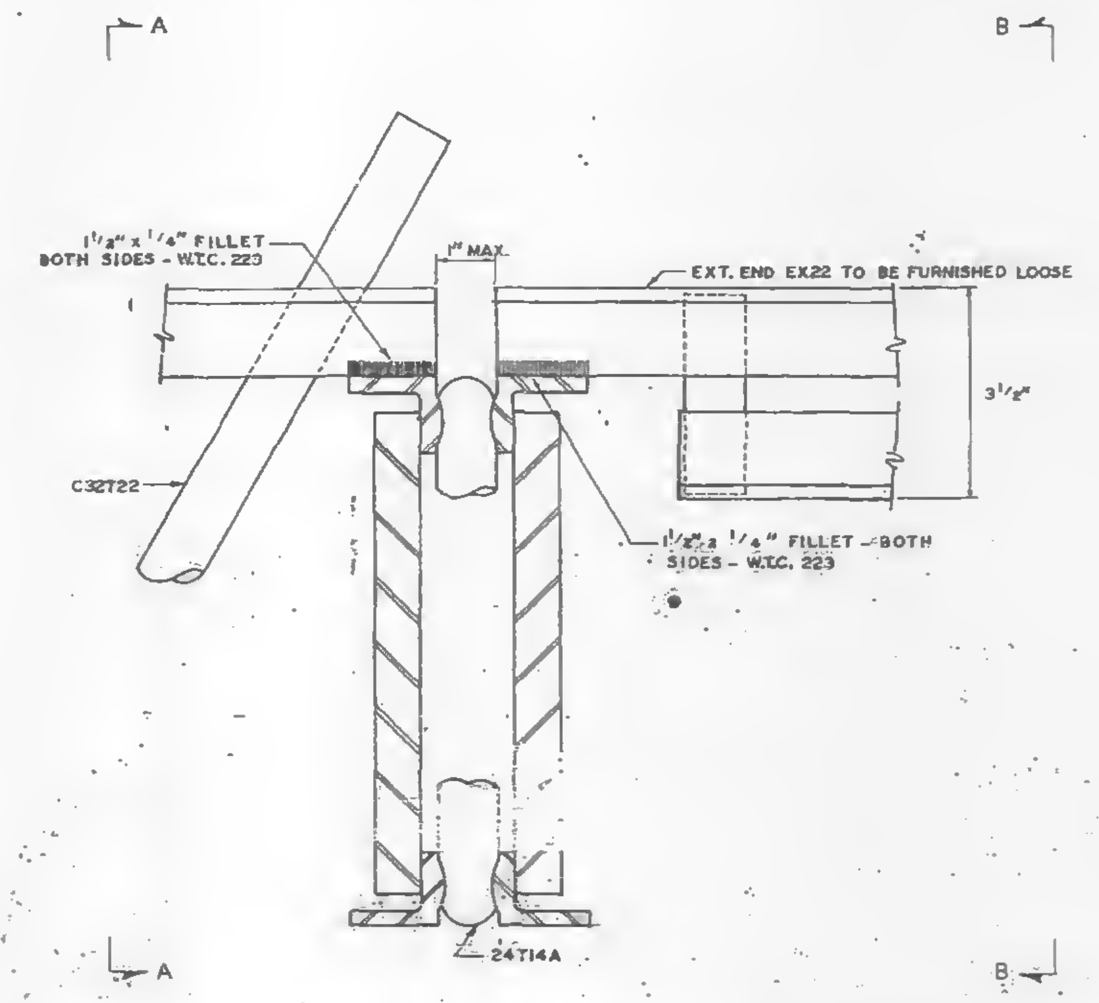
△1

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 5-X & 3-XA FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

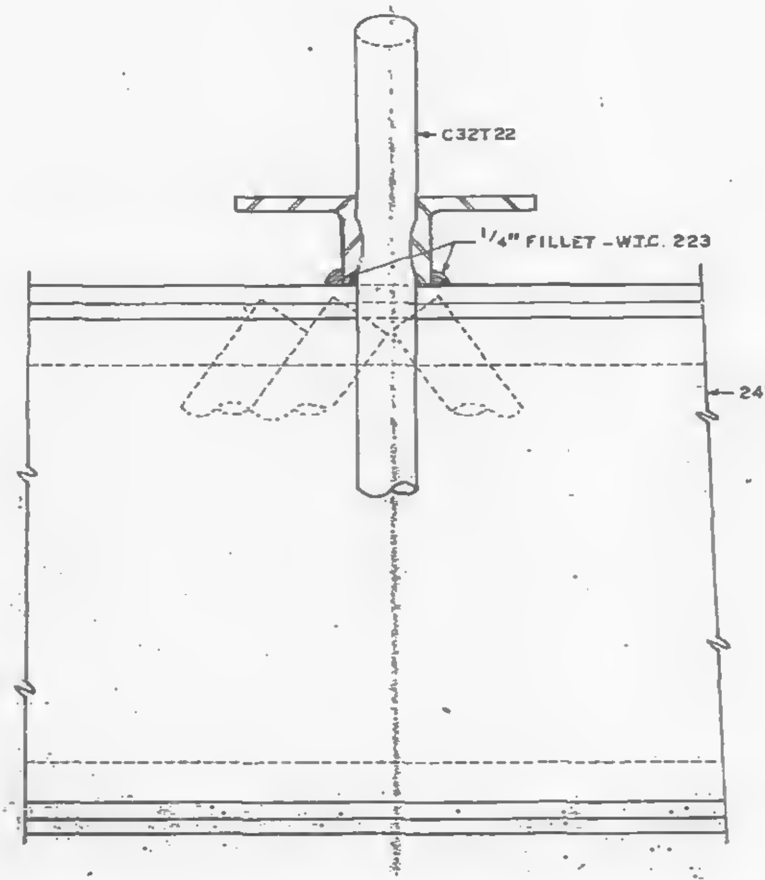
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-AB4-57	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 1/31/69	DRAWN BY: G.D.C. DATE NOV. 18, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE	CHECKED BY: T.M.CHURA DATE NOV. 18, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 218

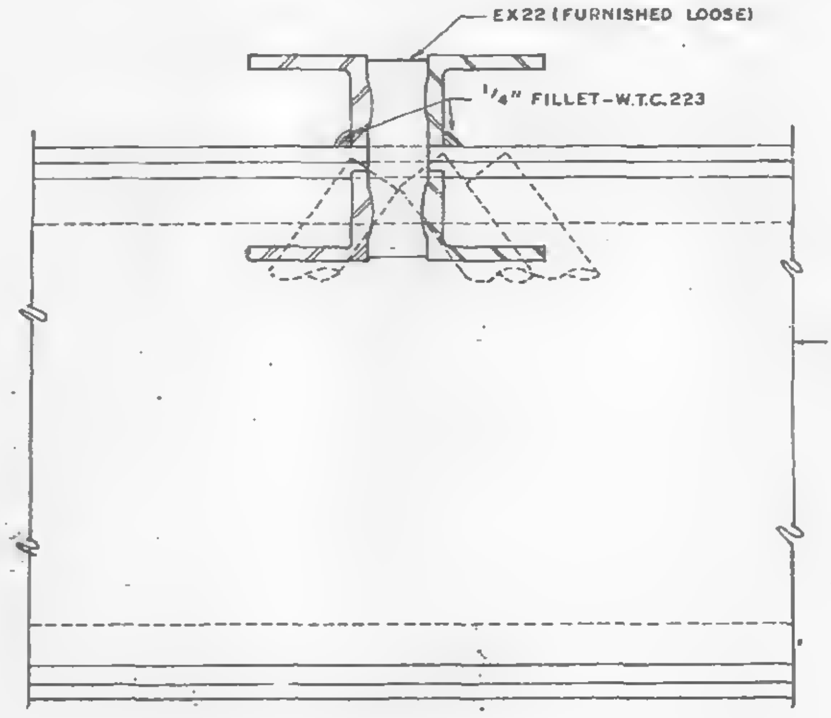

A
B
A
B
1 1/2" x 1/4" FILLET BOTH SIDES - W.T.C. 223
1" MAX.
EXT. END EX22 TO BE FURNISHED LOOSE
3 1/2"
C32T22
1 1/2" x 1/4" FILLET - BOTH SIDES - W.T.C. 223
24T14A

INTERIOR BRIDGING TRUSS CONNECTION (5-X)

24T14A TO C32T22 IN PANELS F2 & FR2



SECTION A-A



SECTION B-B

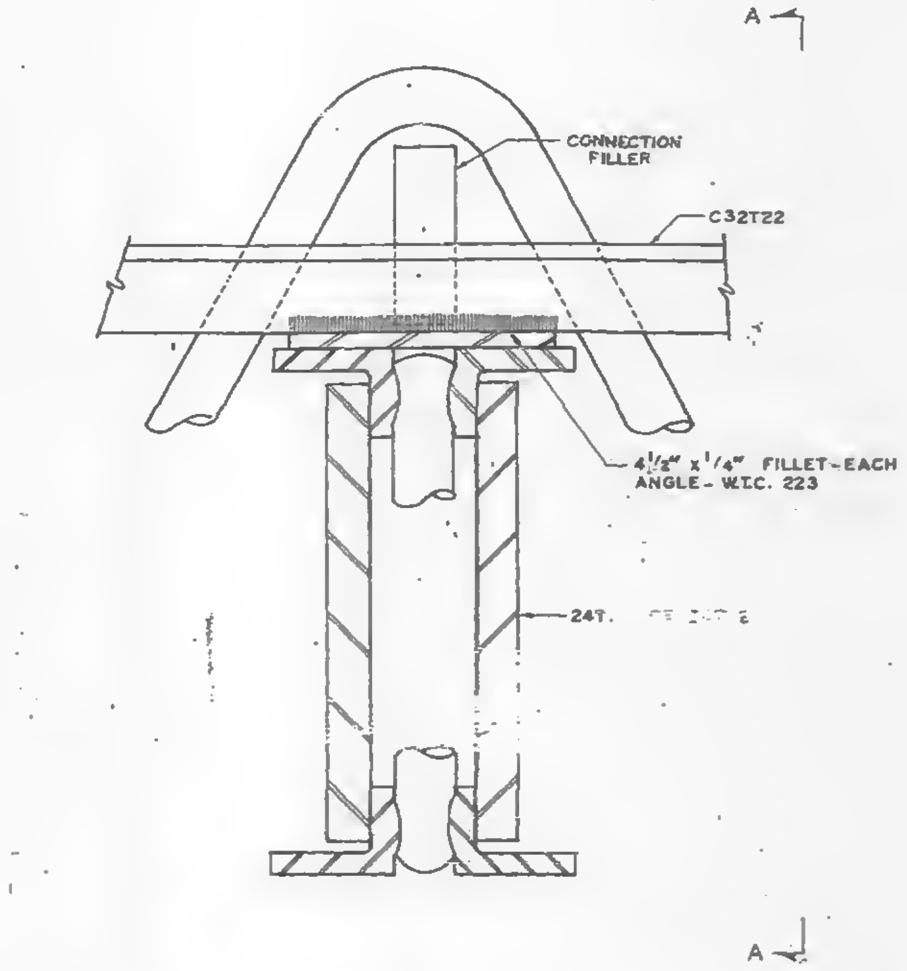
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

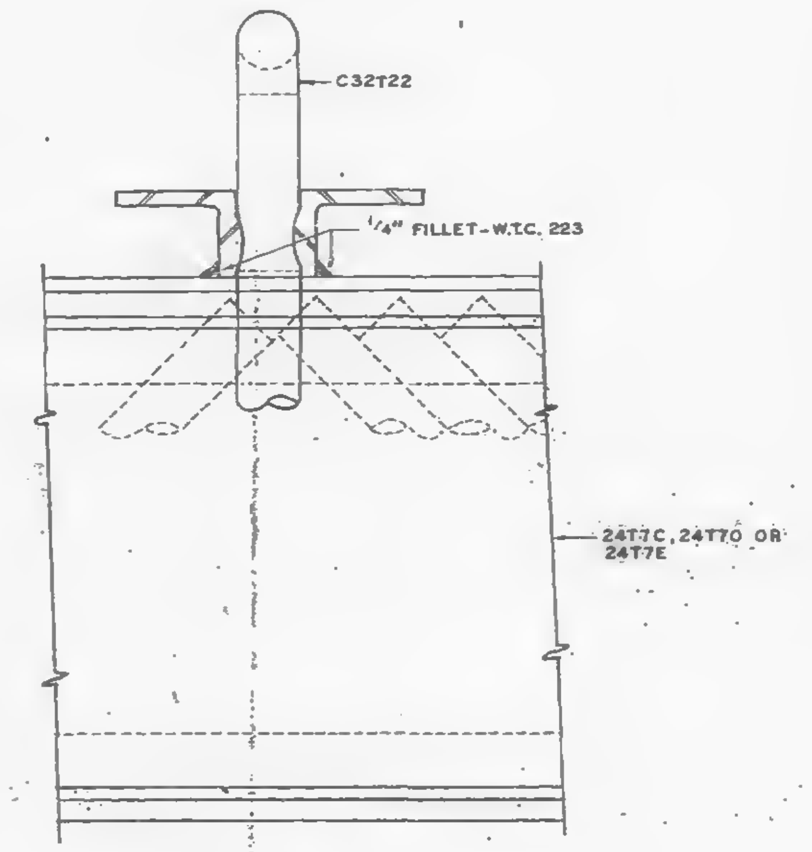
CONNECTION DETAIL 5-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

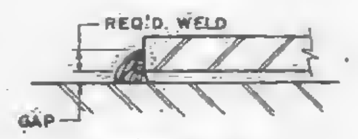
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-57	PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A.	DATE 12/6/68	DRAWN BY: G.D.C. DATE NOV. 18, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 18, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: CARL WEBER LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 218



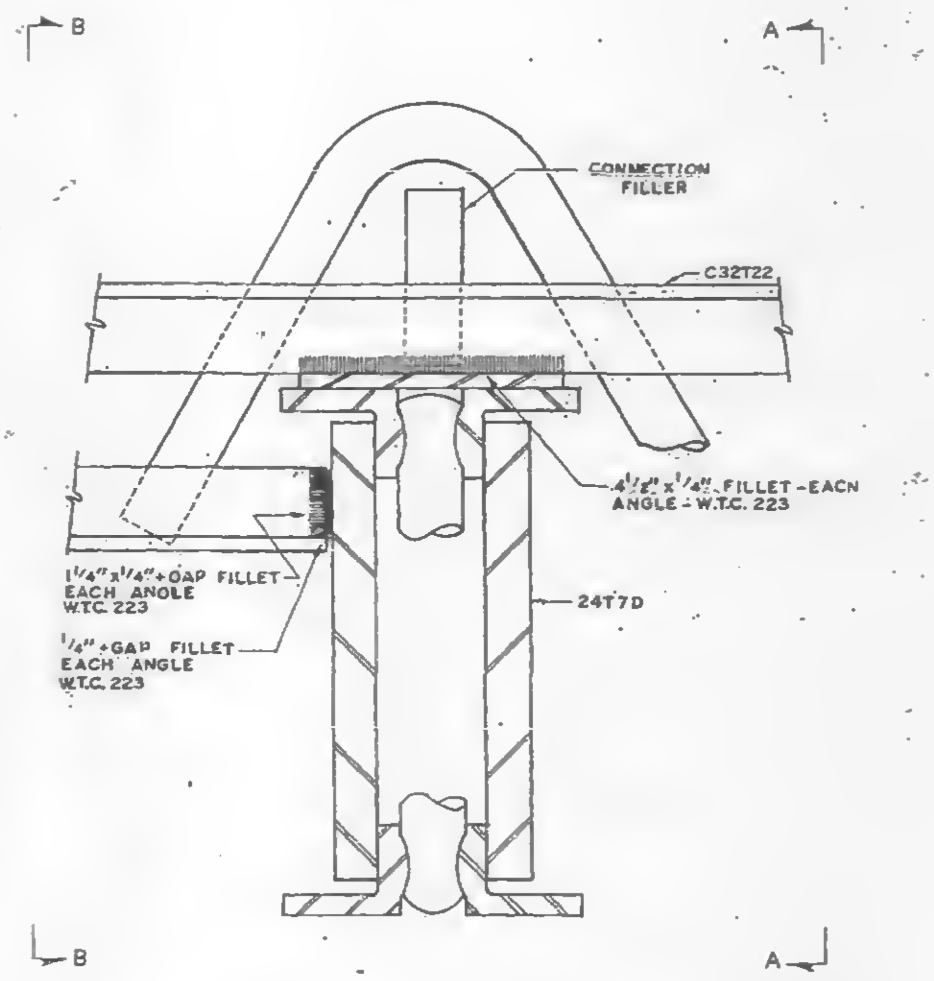
INTERIOR BRIDGING TRUSS CONNECTION (6-X)



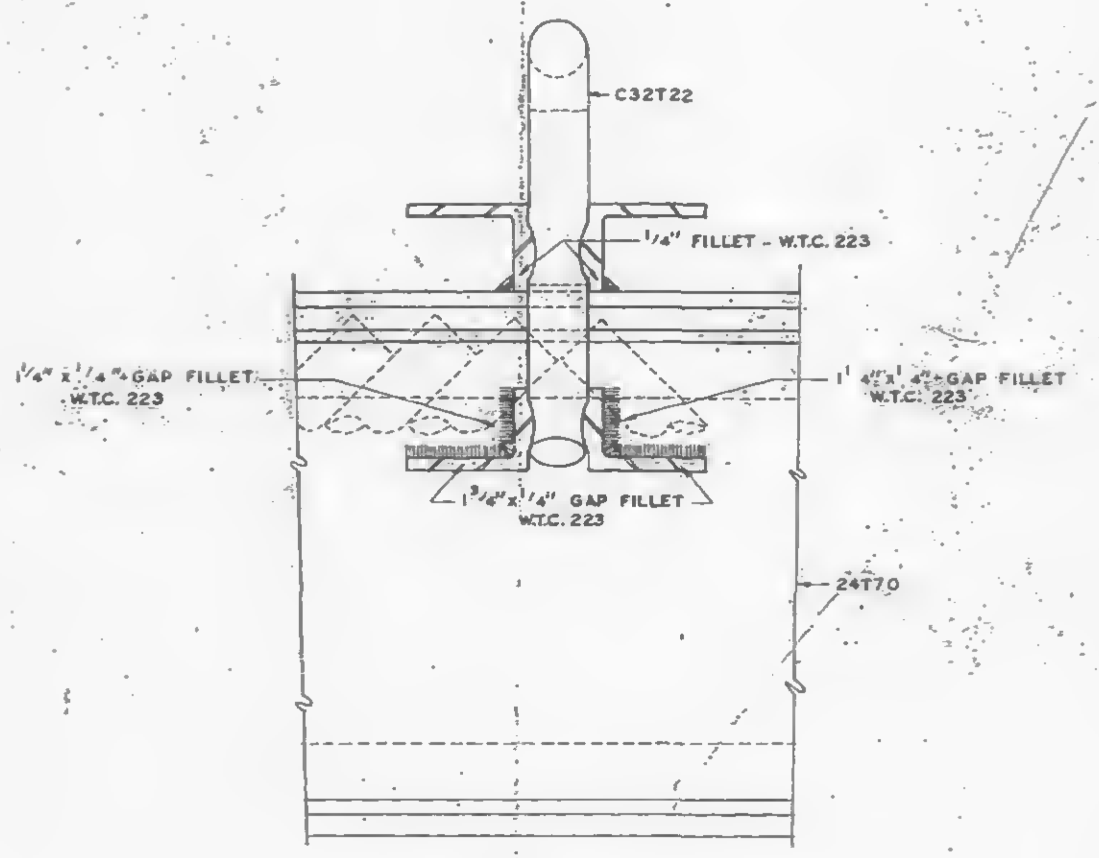
SECTION A-A



DETAIL "A"


B
A
CONNECTION FILLER
C32T22
4 1/2" x 1/4" FILLET-EACH ANGLE-W.T.C. 223
1 1/4" x 1/4" + GAP FILLET EACH ANGLE W.T.C. 223
1/4" + GAP FILLET EACH ANGLE W.T.C. 223
24T7D
B
A

INTERIOR BRIDGING TRUSS CONNECTION (6-XA)


C32T22
1/4" FILLET - W.T.C. 223
1 1/4" x 1/4" + GAP FILLET W.T.C. 223
1 1/4" x 1/4" + GAP FILLET W.T.C. 223
1 3/4" x 1/4" GAP FILLET W.T.C. 223
24T70

SECTION B-B

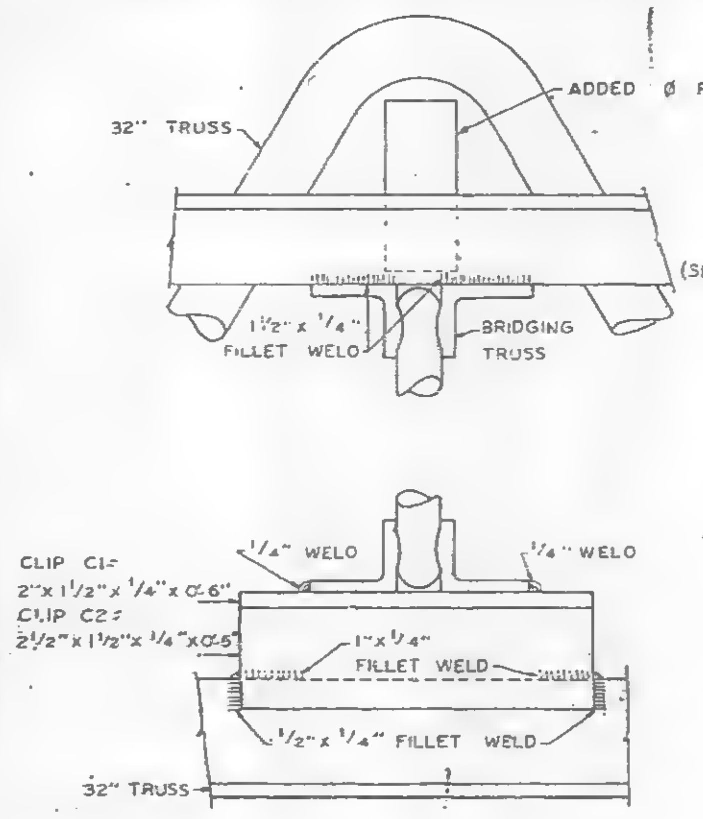
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL A, THIS SHEET, FOR ALL +GAP FILLET WELDS.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER. - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

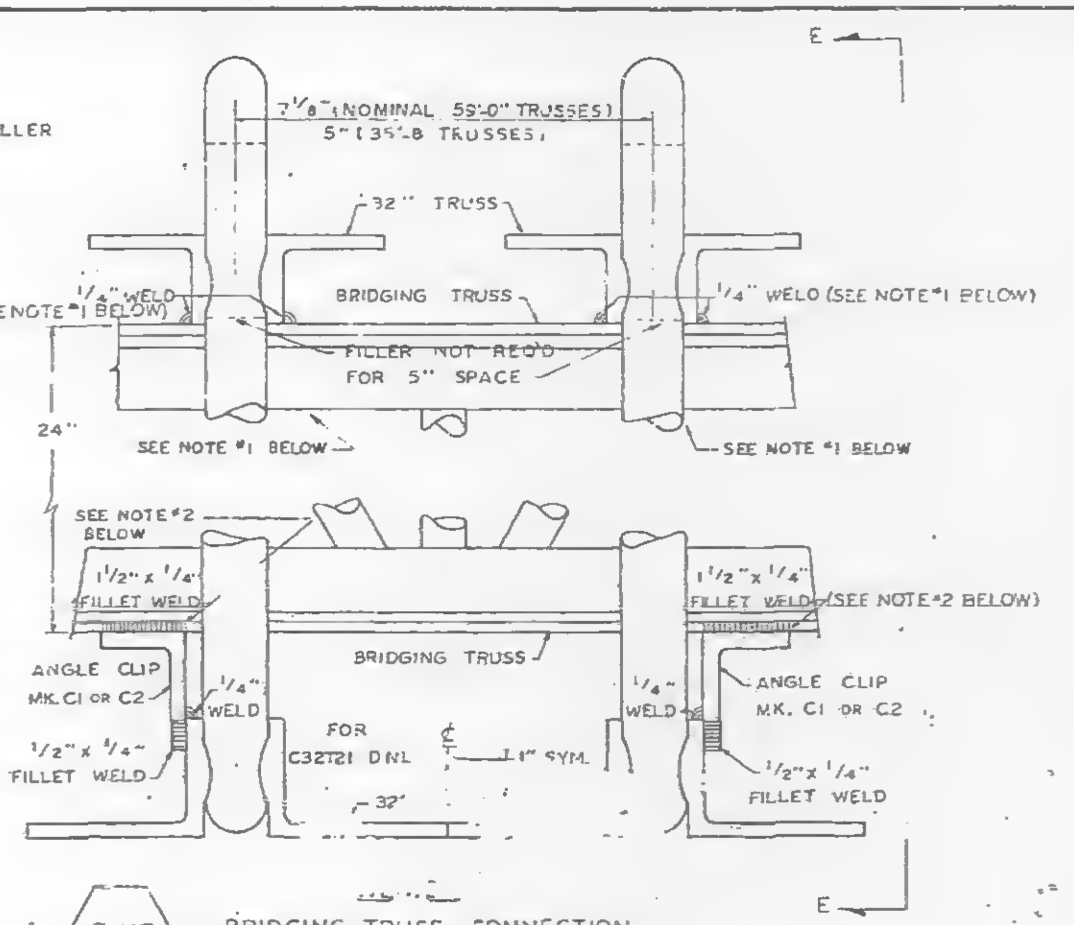
CONNECTION DETAILS 6-X & 6-XA FOR FLOORS 25, 59 & 92
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-59	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 12/6/68	DRAWN BY: G.D.C. DATE NOV. 19, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 19, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 219



SECTION E-E



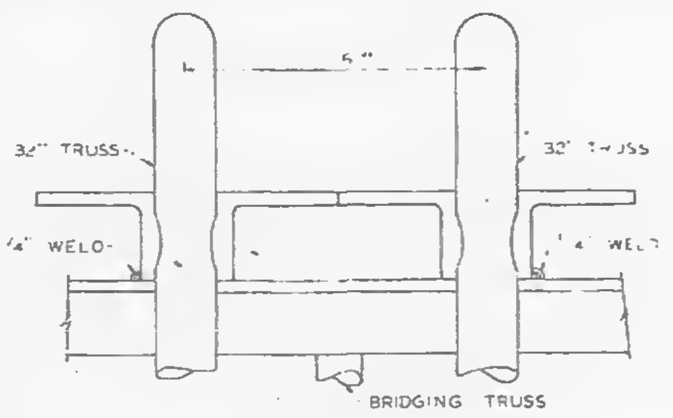
5-XC BRIDGING TRUSS CONNECTION

(CENTER OF PANEL)

(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 8-C IN F & FR PANELS.)

NOTES:

- #1 24T1D C thru H ~~[illegible]~~, 24T1C H DO NOT HAVE A TOP CHORD PLATE.
- #2 24T14A, 24T15A, & 24T16C A thru 24T16G DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.



4-XCB*

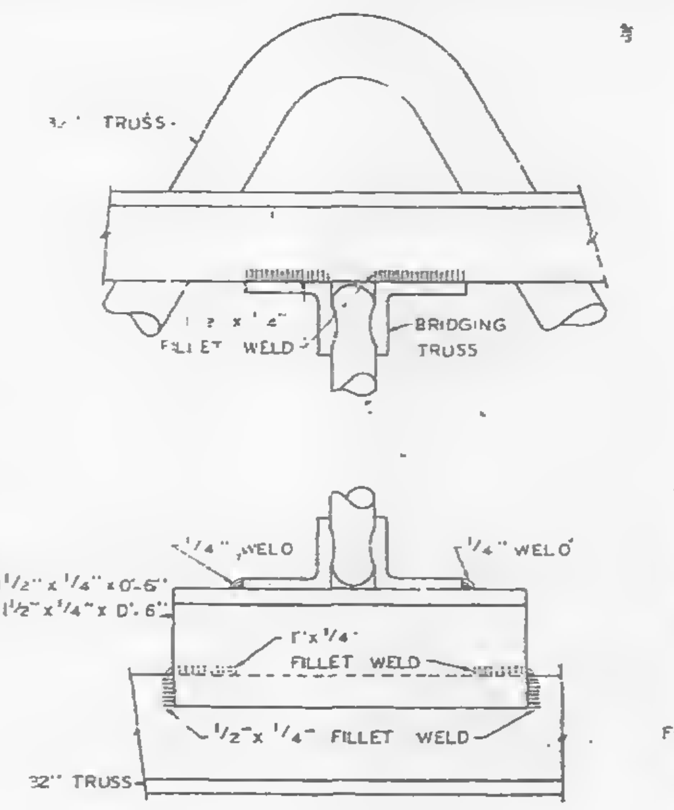
INTERIOR BRIDGING TRUSS CONNECTION

(CENTER OF PANEL 5" ℄ TO ℄) PANELS: G2, GR2, H2, HR2 & J2. H7 & HR7

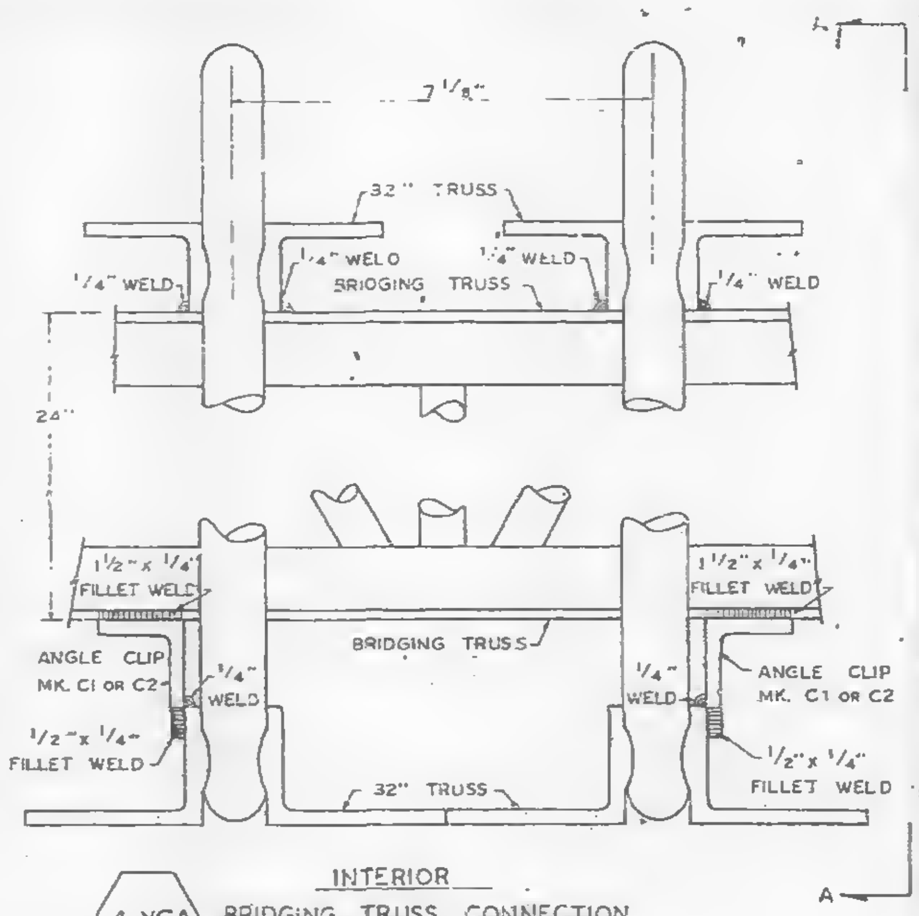
* 4-XCB IS THE SAME AS 4-XCA EXCEPT FOR 5" ℄ DIMENSION.

C1 = 2" x 1 1/2" x 1/4" x 0'-6"

C2 = 2 1/2" x 1 1/2" x 1/4" x 0'-6"



SECTION A-A

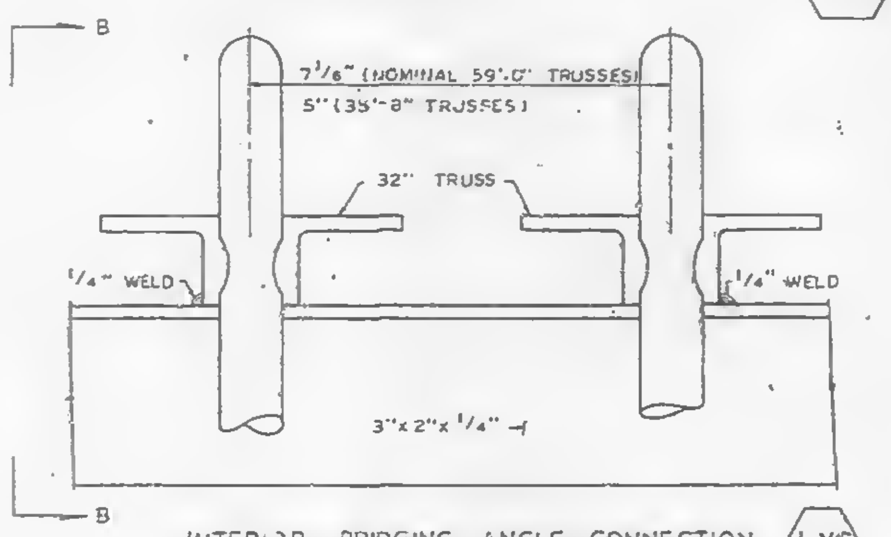


4-XCA INTERIOR BRIDGING TRUSS CONNECTION

(CENTER OF PANEL)

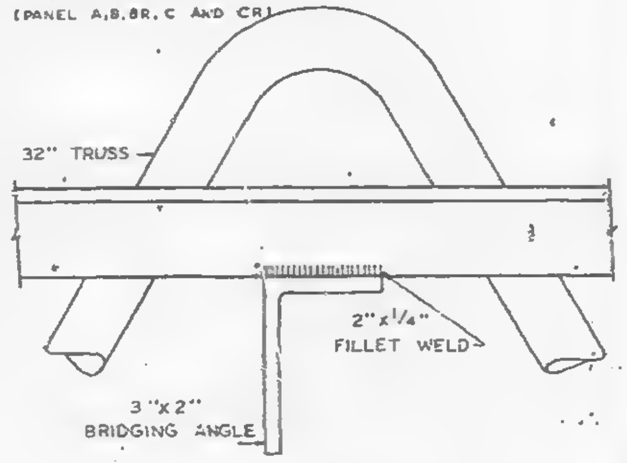
(7 1/8" ℄ TO ℄)

(PANEL A, B, BR, C AND CR)

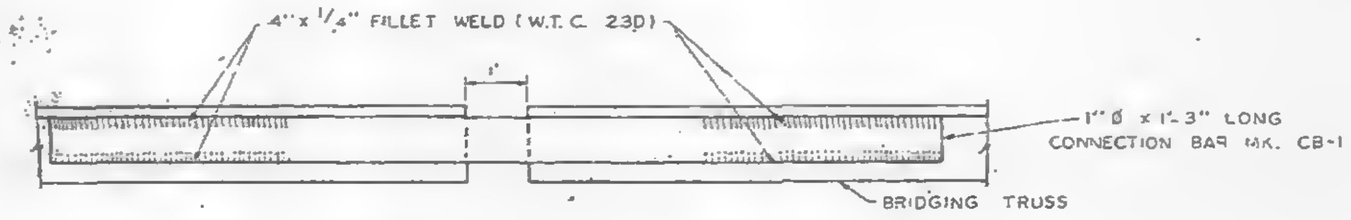


INTERIOR BRIDGING ANGLE CONNECTION 1-XC

(CENTER OF PANEL)

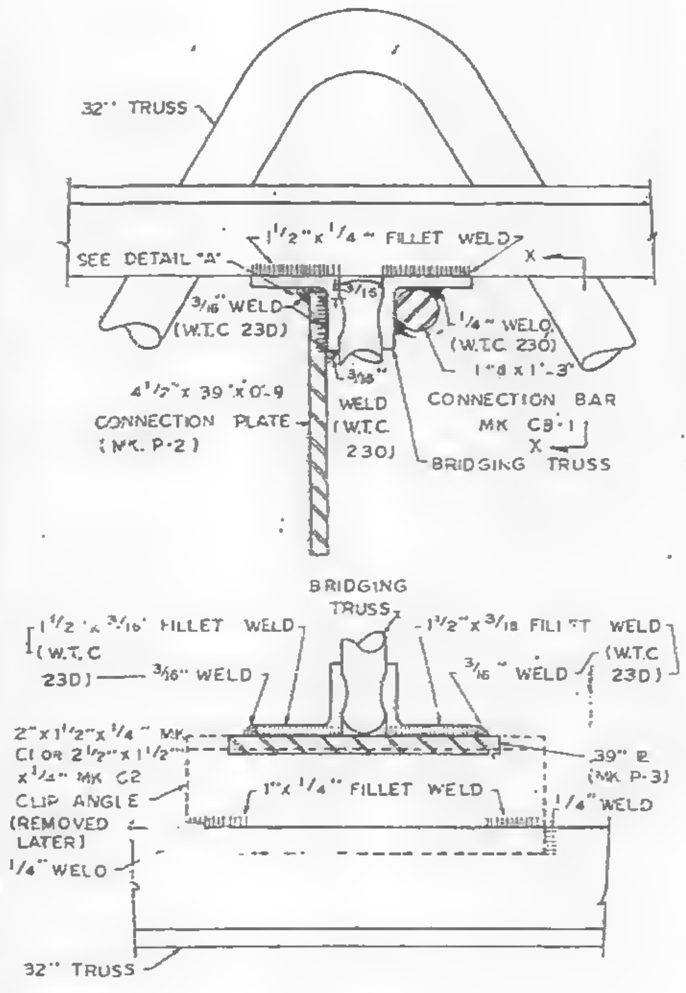


SECTION B-B

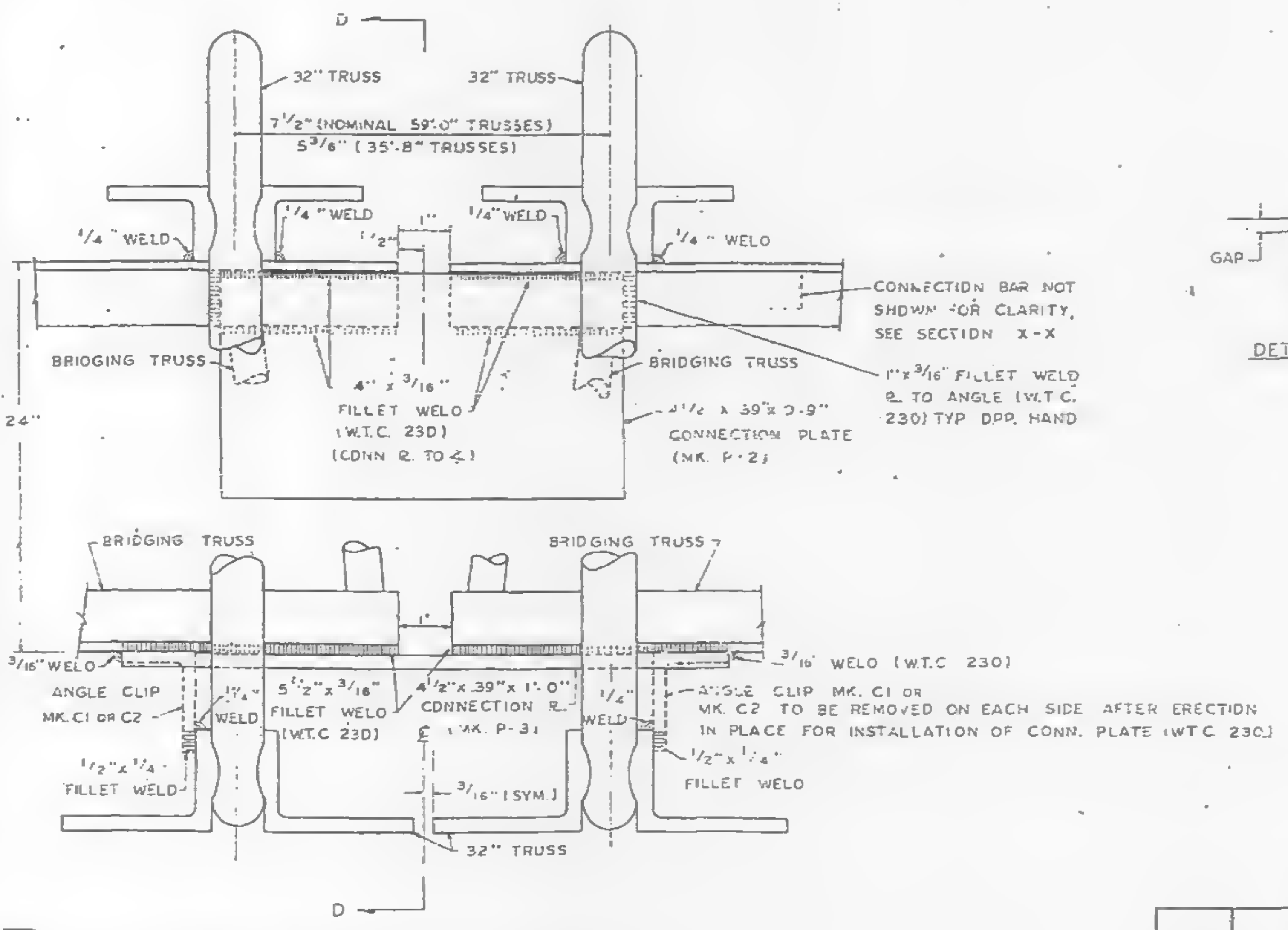


4" x 1/4" FILLET WELD (W.T.C. 230)
1" Ø x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

SECTION X-X



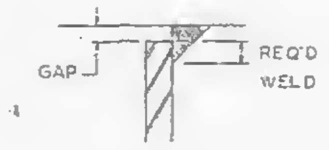
SECTION D-D



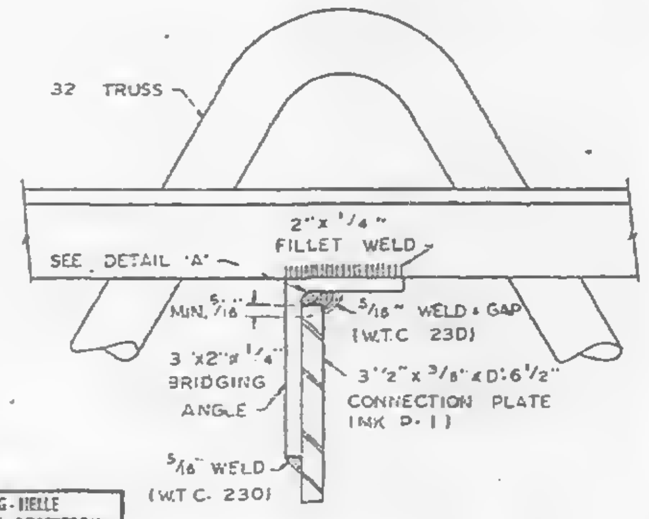
D
32" TRUSS
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1"
2"
CONNECTION BAR NOT SHOWN FOR CLARITY, SEE SECTION X-X
BRIDGING TRUSS
BRIDGING TRUSS
4" x 3/16" FILLET WELD (W.T.C 230) (CONN ℔ TO ∠)
1" x 3/16" FILLET WELD ℔ TO ANGLE (W.T.C. 230) TYP OPP. HAND
4 1/2" x 39" x 0'-9" CONNECTION PLATE (MK. P-2)
24"
BRIDGING TRUSS
BRIDGING TRUSS
3/16" WELD
3/16" WELD (W.T.C 230)
ANGLE CLIP MK. C1 OR C2
1/4" WELD
5 1/2" x 3/16" FILLET WELD (W.T.C 230)
4 1/2" x 39" x 1'-0" CONNECTION (MK. P-3)
1/4" WELD
ANGLE CLIP MK. C1 OR MK. C2 TO BE REMOVED ON EACH SIDE AFTER ERECTION IN PLACE FOR INSTALLATION OF CONN. PLATE (W.T.C 230)
1/2" x 1/4" FILLET WELD
1/2" x 1/4" FILLET WELD
3/16" (SYM)
32" TRUSS
D

7-XC PANEL JOINT BRIDGING TRUSS CONNECTION

EXCEPT SPECIAL CONNECTIONS 8-XC, 9-XC, 10-XC & 11-XC.

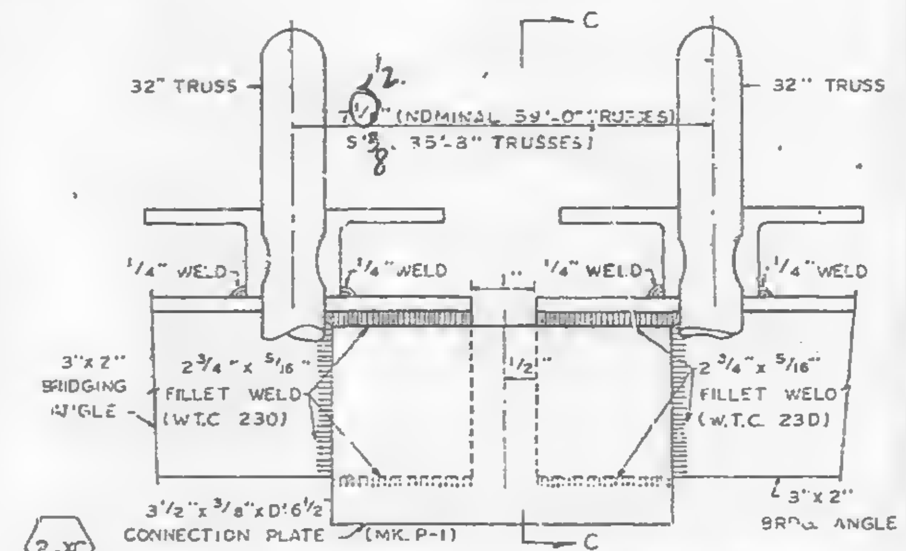


DETAIL "A"



32 TRUSS
SEE DETAIL "A"
2" x 1/4" FILLET WELD
MIN. 5/16"
5/16" WELD + GAP (W.T.C 230)
3" x 2" x 1/4" BRIDGING ANGLE
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE (MK P-1)
5/16" WELD (W.T.C. 230)

SECTION C-C



C
32" TRUSS
32" TRUSS
7 1/2" (NOMINAL 59'-0" TRUSSES)
5 3/8" (35'-8" TRUSSES)
1/4" WELD
1/4" WELD
1/4" WELD
1/4" WELD
1"
1/2"
3" x 2" BRIDGING ANGLE
2 3/4" x 5/16" FILLET WELD (W.T.C 230)
2 3/4" x 5/16" FILLET WELD (W.T.C. 230)
3" x 2" BRDG. ANGLE
3 1/2" x 3/8" x 0'-6 1/2" CONNECTION PLATE (MK. P-1)
C

2-XC PANEL JOINT BRIDGING ANGLE CONNECTION

SKILLING - HELLE
CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
☐ REJECTED
Date 12/12/68 SC

NOTE.

UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL

ALL PLATES & Ø SPLICE BARS TO BE ASTM A36.

SEE SHEET CD 211 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

7-A84-15	7-22-68
7-A84-16	7-22-68

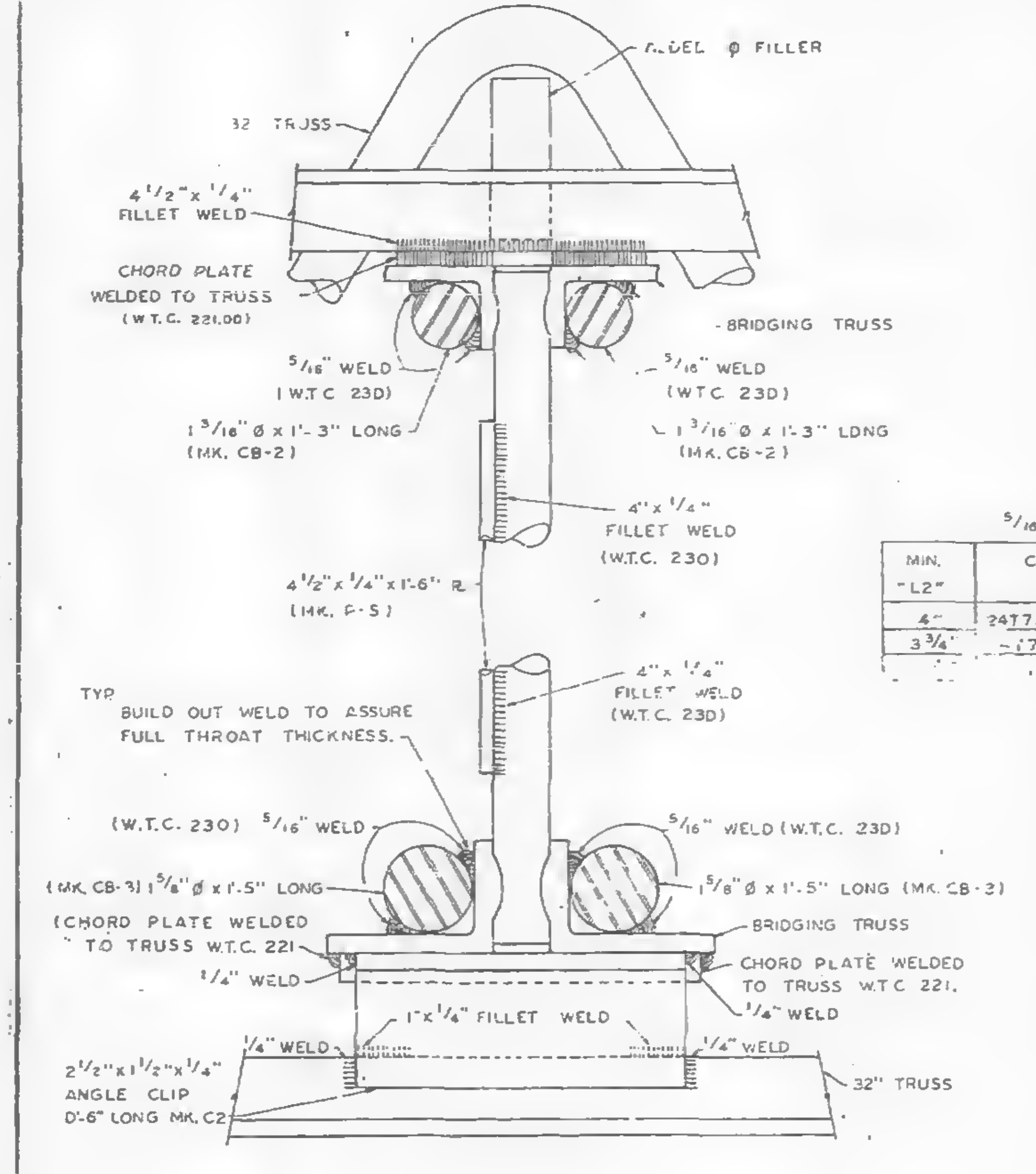
NO	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

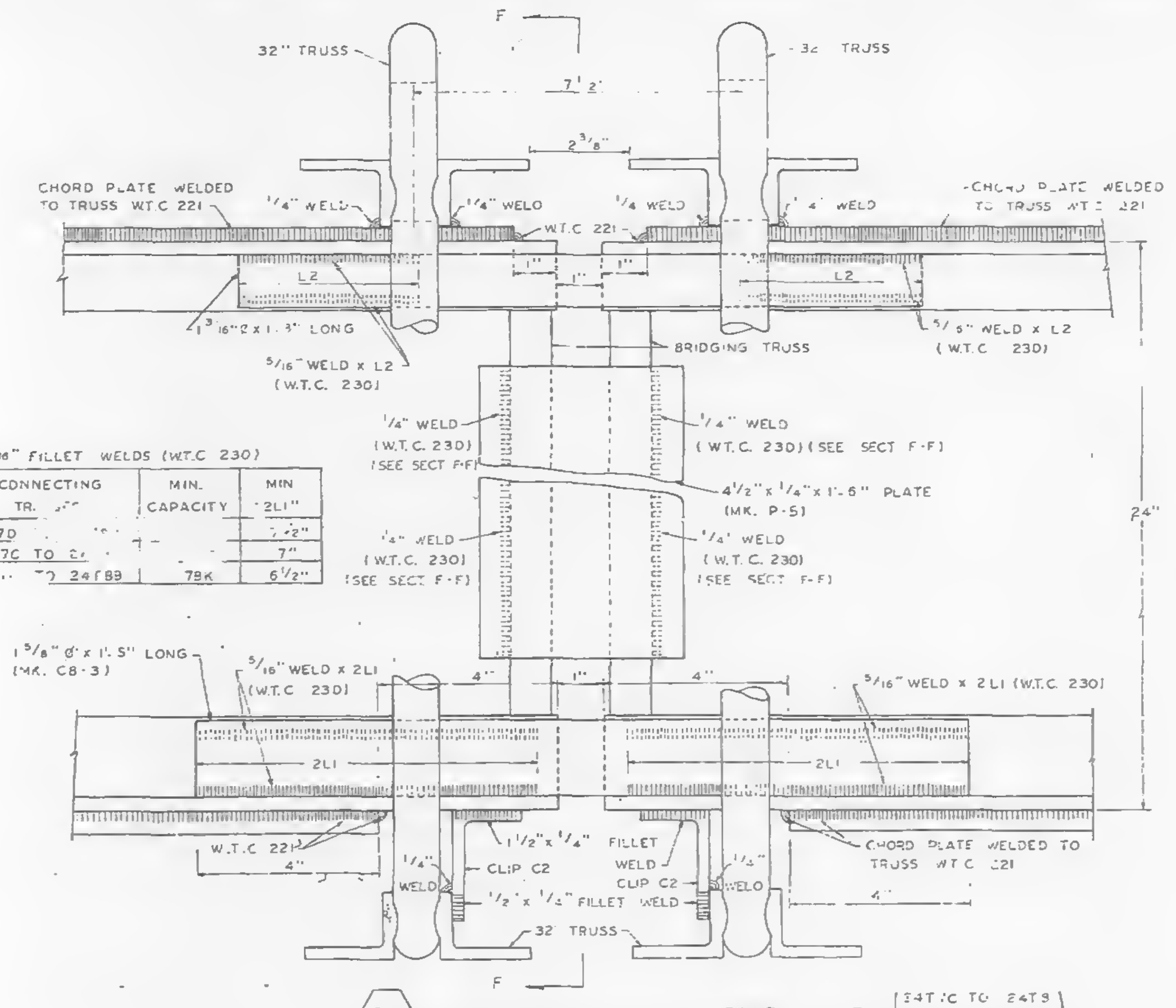
STANDARD CONNECTIONS FOR FLOORS 25, 59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. PLATE
APPROVED FOR FABRICATION BY ______ FOR PONYA DATE
DRAWN BY L.R. DATE DEC. 2, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY T.M. CHURA DATE DEC. 2, 1968
IN CHARGE OF PROD. DEV
DETAILED BY L.C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO. CD 220

1


ADDED ¢ FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS (W.T.C. 221.00)
BRIDGING TRUSS
5/16" WELD (W.T.C. 230)
1 3/16" ø x 1'-3" LONG (MK. CB-2)
4" x 1/4" FILLET WELD (W.T.C. 230)
4 1/2" x 1/4" x 1'-6" PL (MK. P-5)
TYP BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
(W.T.C. 230) 5/16" WELD
5/16" WELD (W.T.C. 230)
(MK. CB-3) 1 5/8" ø x 1'-5" LONG
1 5/8" ø x 1'-5" LONG (MK. CB-3)
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
1" x 1/4" FILLET WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP 0'-6" LONG MK. C2
32" TRUSS

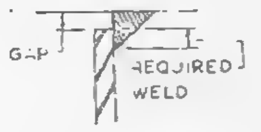
SECTION F-F


F
32" TRUSS
7 1/2"
2 3/8"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD
W.T.C. 221
1"
L2
1 3/16" ø x 1'-3" LONG
5/16" WELD x L2 (W.T.C. 230)
BRIDGING TRUSS
1/4" WELD (W.T.C. 230) (SEE SECT F-F)
4 1/2" x 1/4" x 1'-6" PLATE (MK. P-5)
24"
1 5/8" ø x 1'-5" LONG (MK. CB-3)
5/16" WELD x 2L1 (W.T.C. 230)
4"
2L1
W.T.C. 221
1 1/2" x 1/4" FILLET WELD
CLIP C2
1/2" x 1/2" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221
32 TRUSS

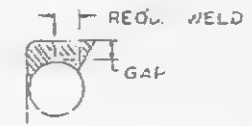
5/16" FILLET WELDS (W.T.C. 230)

MIN. "L2"	CONNECTING TR. [illegible]	MIN. CAPACITY	MIN "2L1"
4"	24T7D [illegible]		7 1/2"
3 3/4"	[illegible]7C TO 2[illegible]		7"
	[illegible] TO 24T8B	79K	6 1/2"

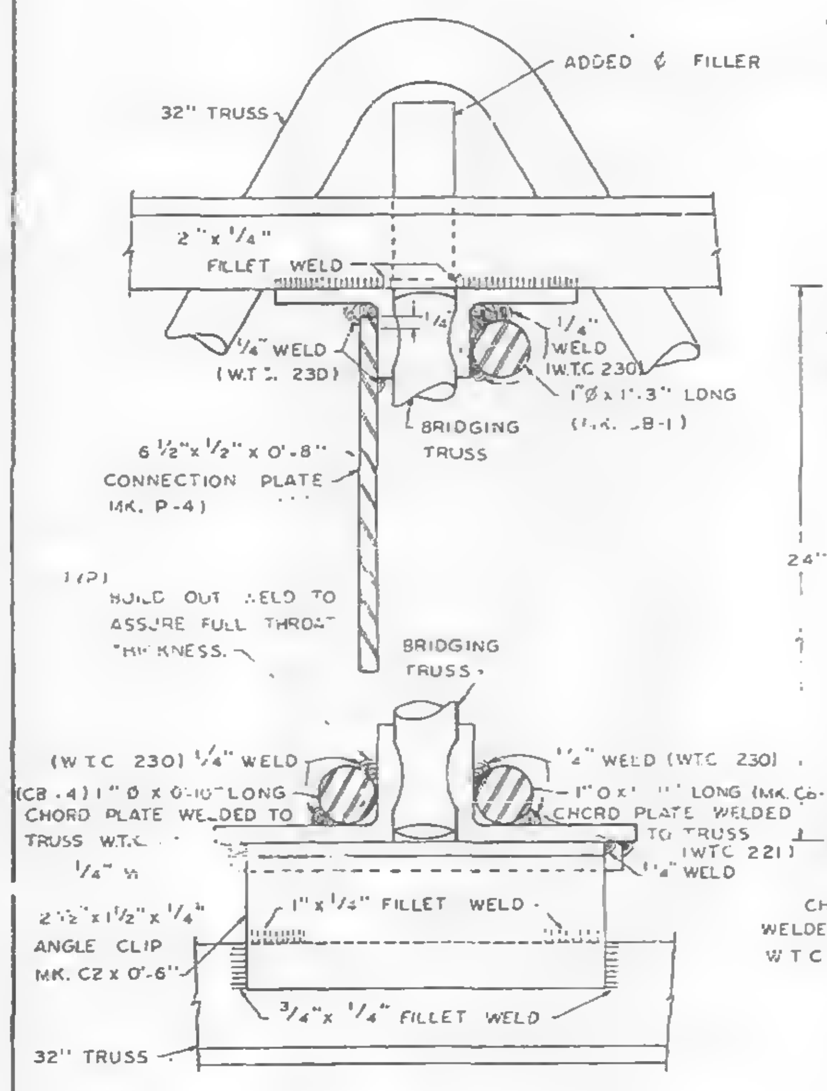
10-XC CONNECTION DETAIL PANEL JOINT
24T7C TO 24T9
24T7D TO 24T8A
24T7E TO 24T8B



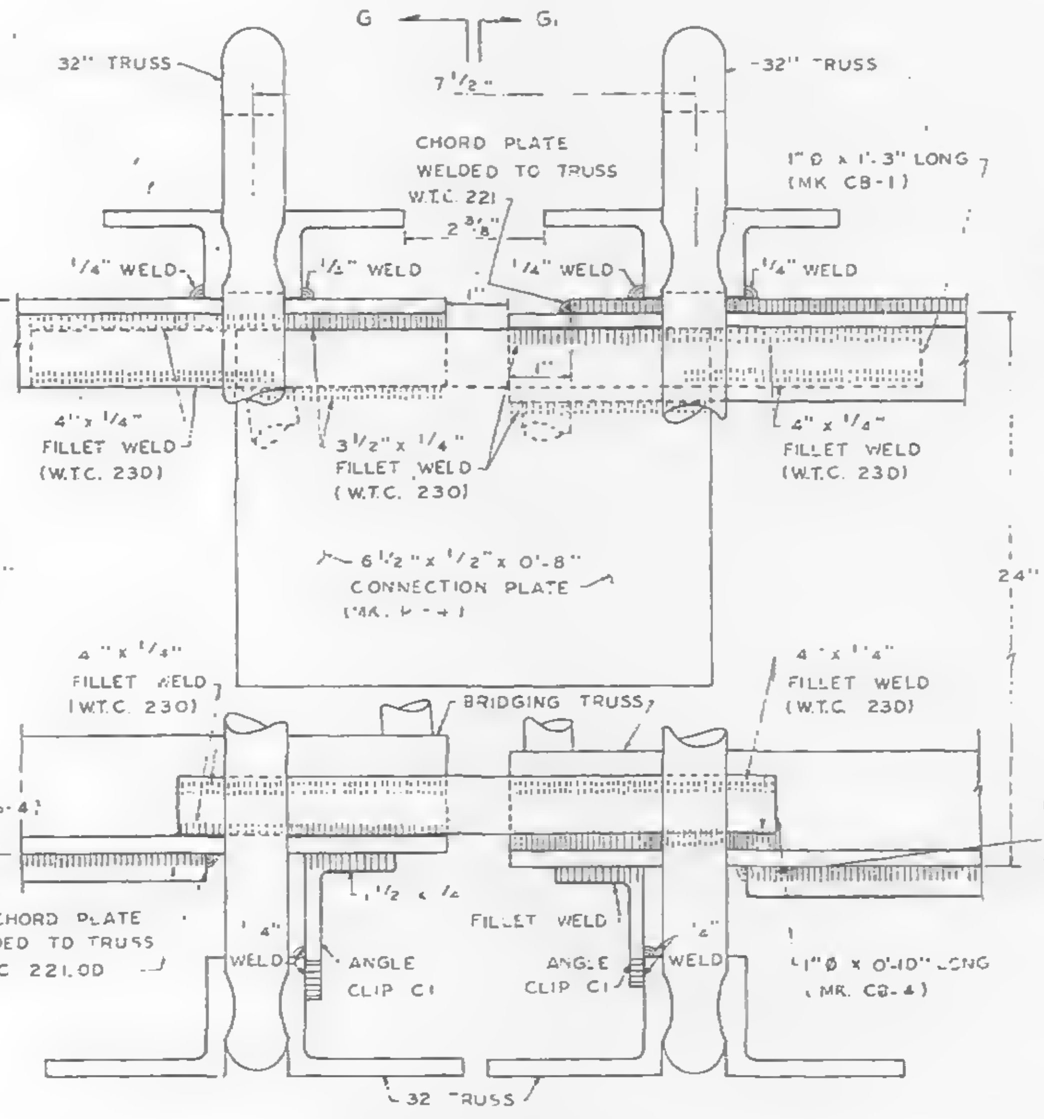
DETAIL "A"



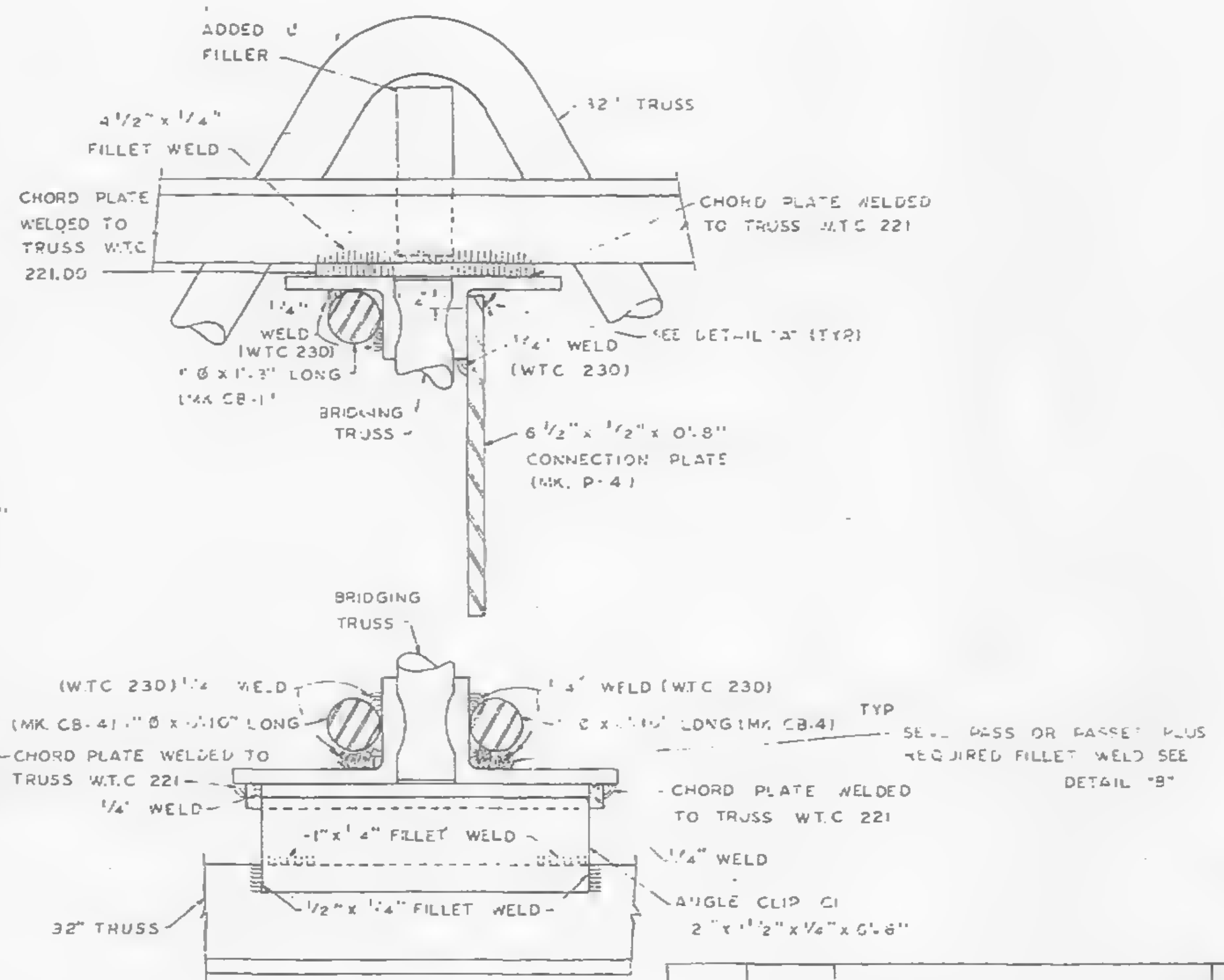
DETAIL "B"


ADDED ¢ FILLER
32" TRUSS
2" x 1/4" FILLET WELD
1/4" WELD (W.T.C. 230)
1/4" WELD (W.T.C. 230)
1" ø x 1'-3" LONG (MK. CB-1)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE MK. P-4
TYP BUILD OUT WELD TO ASSURE FULL THROAT THICKNESS.
BRIDGING TRUSS
(W.T.C. 230) 1/4" WELD
1/4" WELD (W.T.C. 230)
(CB-4) 1" ø x 0'-10" LONG
CHORD PLATE WELDED TO TRUSS W.T.C.
1/4" WELD
1" x 1/2" FILLET WELD
2 1/2" x 1 1/2" x 1/4" ANGLE CLIP MK. C2 x 0'-6"
3/4" x 1/4" FILLET WELD
32" TRUSS

SECTION G-G


G G1
32" TRUSS
7 1/2"
CHORD PLATE WELDED TO TRUSS W.T.C. 221
2 3/8"
1" ø x 1'-3" LONG (MK CB-1)
1/4" WELD
4" x 1/4" FILLET WELD (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
24"
BRIDGING TRUSS
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
1/4" WELD
ANGLE CLIP C1
FILLET WELD
1" ø x 0'-10" LONG (MK. CB-4)
32 TRUSS

8-XC CONNECTION DETAIL PANEL JOINT
24T9 TO 24T10 OR 24T10C
24T8A TO 24T10A OR 24T10D
24T8B TO 24T10B OR 24T10E


ADDED ¢ FILLER
32" TRUSS
4 1/2" x 1/4" FILLET WELD
CHORD PLATE WELDED TO TRUSS W.T.C. 221.00
CHORD PLATE WELDED TO TRUSS W.T.C. 221
1/4" WELD (W.T.C. 230)
1" ø x 1'-3" LONG (MK CB-1)
SEE DETAIL "A" (TYP)
1/4" WELD (WTC 230)
BRIDGING TRUSS
6 1/2" x 1/2" x 0'-8" CONNECTION PLATE (MK. P-4)
(WTC 230) 1/4" WELD
1/4" WELD (WTC 230)
(MK. CB-4) 1" ø x 0'-10" LONG (MK. CB-4)
TYP SEAL PASS OR PASSES PLUS REQUIRED FILLET WELD SEE DETAIL "B"
1" x 1/4" FILLET WELD
1/2" x 1/4" FILLET WELD
ANGLE CLIP C1 2" x 1 1/2" x 1/4" x 0'-6"
32" TRUSS

SECTION G1-G1

REF. DRWG.

7-A84-18 7-22-68
7-A84-18.1 7-22-68

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. ALL PLATES & ø SPLICE BARS TO BE ASTM A36

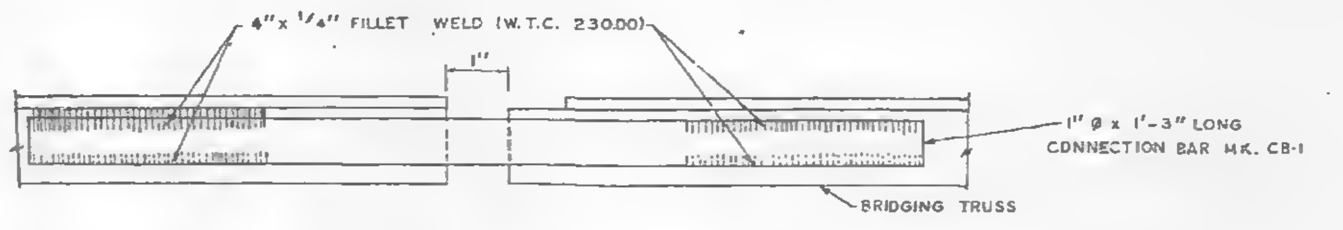
NO.	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

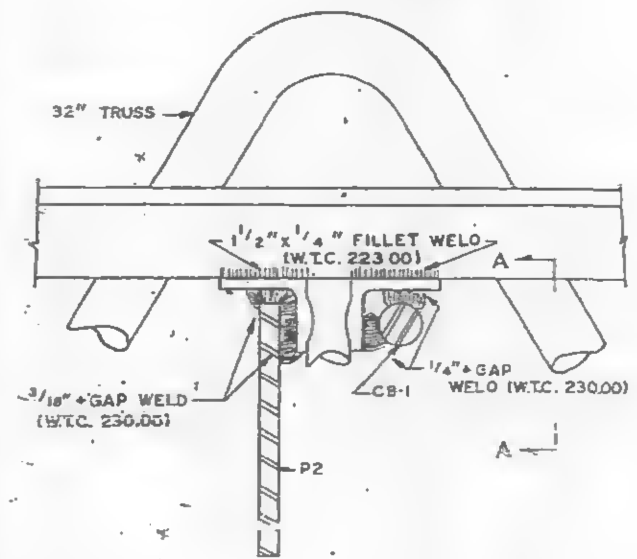
STANDARD CONNECTION DETAILS 8-XC & 10-XC

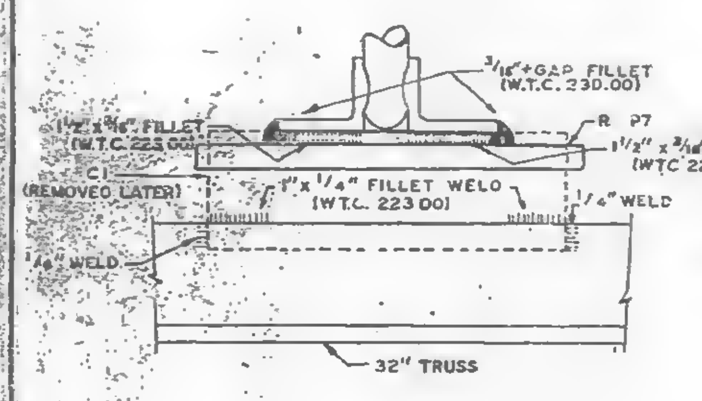
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. ______ PLATE ______	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A	DATE 1/31/69	DRAWN BY ______ DATE: JAN. 13, 1969	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: JAN. 13, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 221

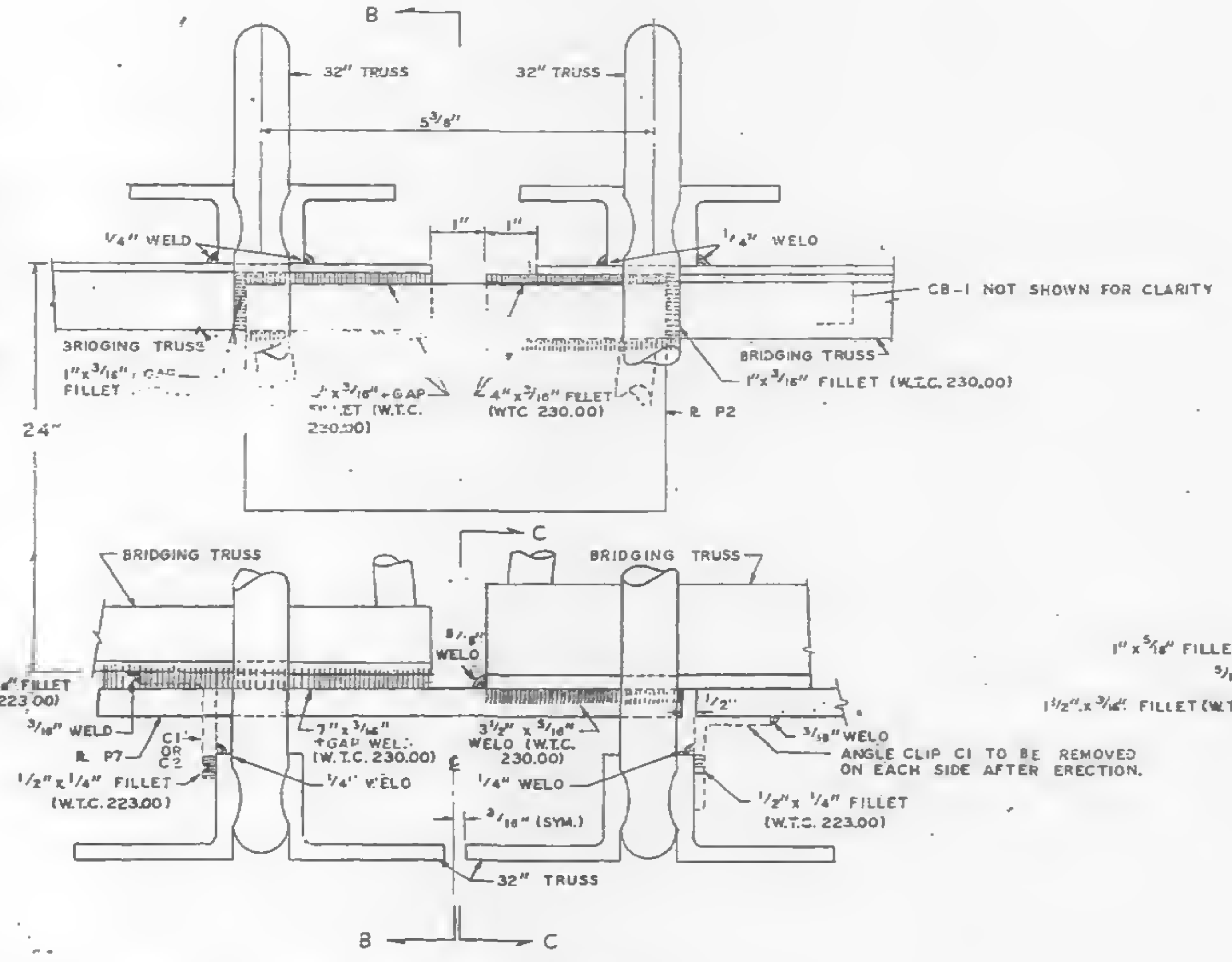

4" x 1/4" FILLET WELD (W.T.C. 230.00)
1"
1" ø x 1'-3" LONG CONNECTION BAR MK. CB-1
BRIDGING TRUSS

SECTION A-A


32" TRUSS
1 1/2" x 1/4" FILLET WELD (W.T.C. 223.00)
A
3/16" + GAP WELD (W.T.C. 230.00)
1/4" + GAP WELD (W.T.C. 230.00)
CB-1
A
P2

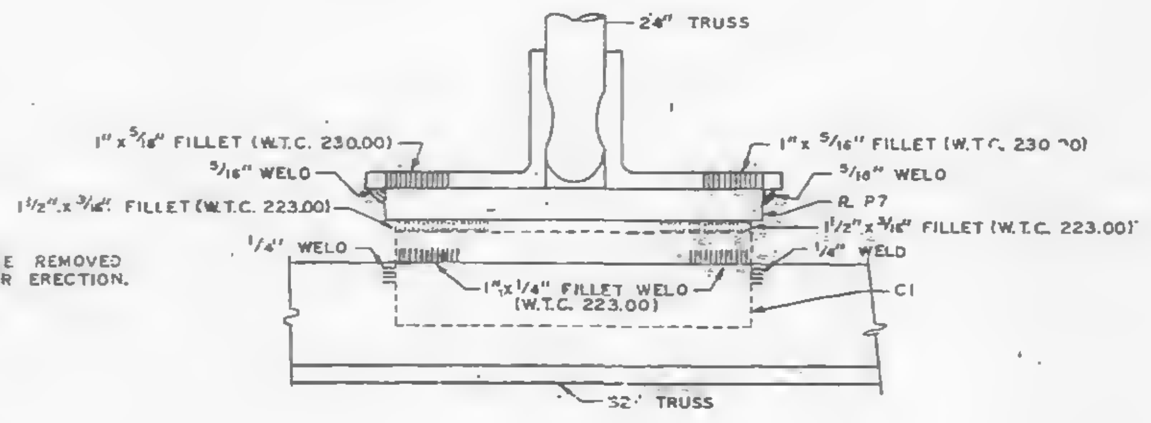

3/16" + GAP FILLET (W.T.C. 230.00)
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
R P7
1 1/2" x 3/16" FILLET (WTC 223.00)
C1 (REMOVED LATER)
1" x 1/4" FILLET WELD (W.T.C. 223.00)
1/4" WELD
1/4" WELD
32" TRUSS

SECTION B-B


B
32" TRUSS
32" TRUSS
5 3/8"
1/4" WELD
1"
1"
1/4" WELD
CB-1 NOT SHOWN FOR CLARITY
BRIDGING TRUSS
1" x 3/16" + GAP FILLET
4" x 3/16" + GAP FILLET (W.T.C. 230.00)
4" x 3/16" FILLET (WTC 230.00)
BRIDGING TRUSS
1" x 3/16" FILLET (W.T.C. 230.00)
R P2
24"
C
BRIDGING TRUSS
BRIDGING TRUSS
5/16" WELD
3/16" WELD
R P7
C1 OR C2
1/2" x 1/4" FILLET (W.T.C. 223.00)
7" x 3/16" + GAP WELD (W.T.C. 230.00)
1/4" WELD
3 1/2" x 5/16" WELD (W.T.C. 230.00)
1/4" WELD
1/2"
3/16" WELD
ANGLE CLIP C1 TO BE REMOVED ON EACH SIDE AFTER ERECTION.
1/2" x 1/4" FILLET (W.T.C. 223.00)
3/16" (SYM.)
32" TRUSS
B
C

9-XC PANEL JOINT BRIDGING TRUSS CONNECTION

24T9 TO 24T11A
24T9A TO 24T11C


24" TRUSS
1" x 5/16" FILLET (W.T.C. 230.00)
1" x 5/16" FILLET (W.T.C. 230.00)
5/16" WELD
5/16" WELD
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
R P7
1 1/2" x 3/16" FILLET (W.T.C. 223.00)
1/4" WELD
1/4" WELD
1" x 1/4" FILLET WELD (W.T.C. 223.00)
C1
32" TRUSS

SECTION C-C

FOR NOTES SEE SHEET CD 220.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

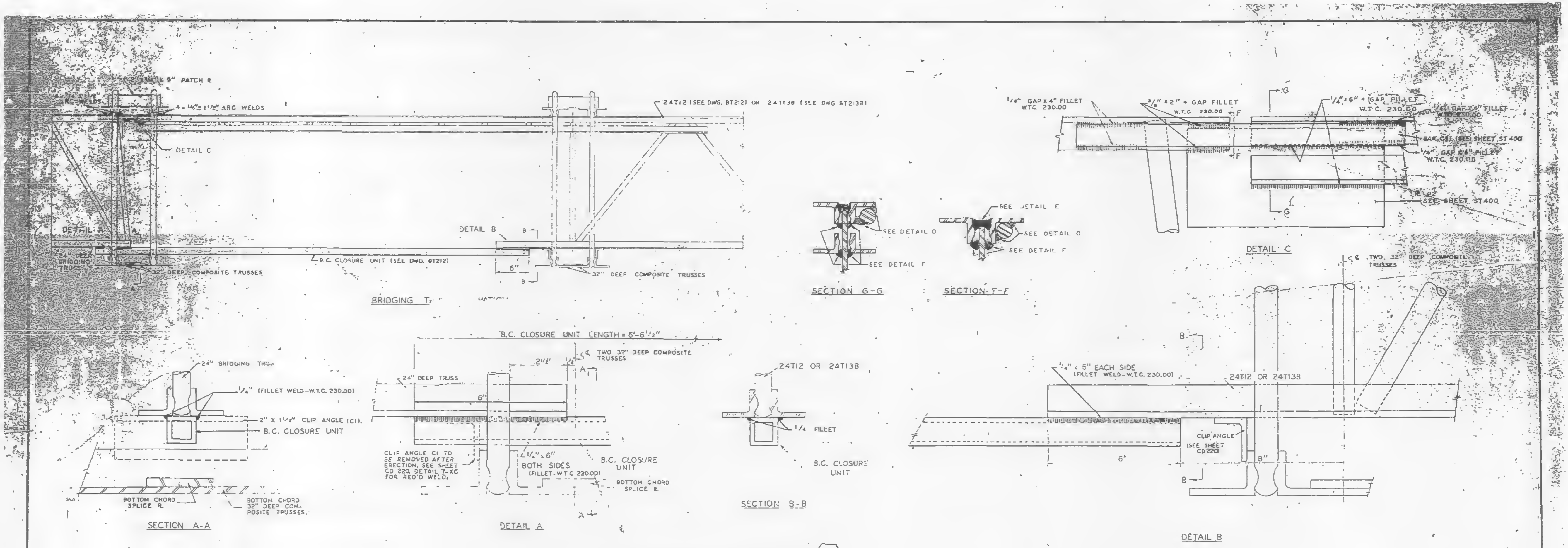
CONNECTION DETAIL 9-XC

FABRICATION BY LACLEDE STEEL COMPANY

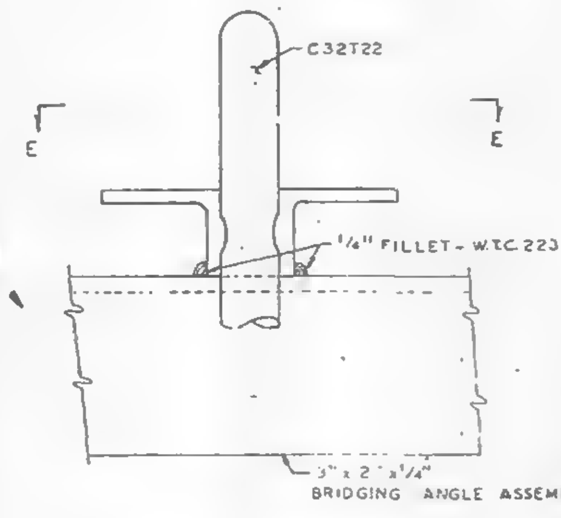
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY James White FOR PONYA	DATE 1/31/69	DRAWN BY: gdc DATE JAN. 13, 1969	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.R.CHURA DATE JAN. 13, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO. WTC 221	SHEET NO. CD 222

LACLEDE STEEL CO.

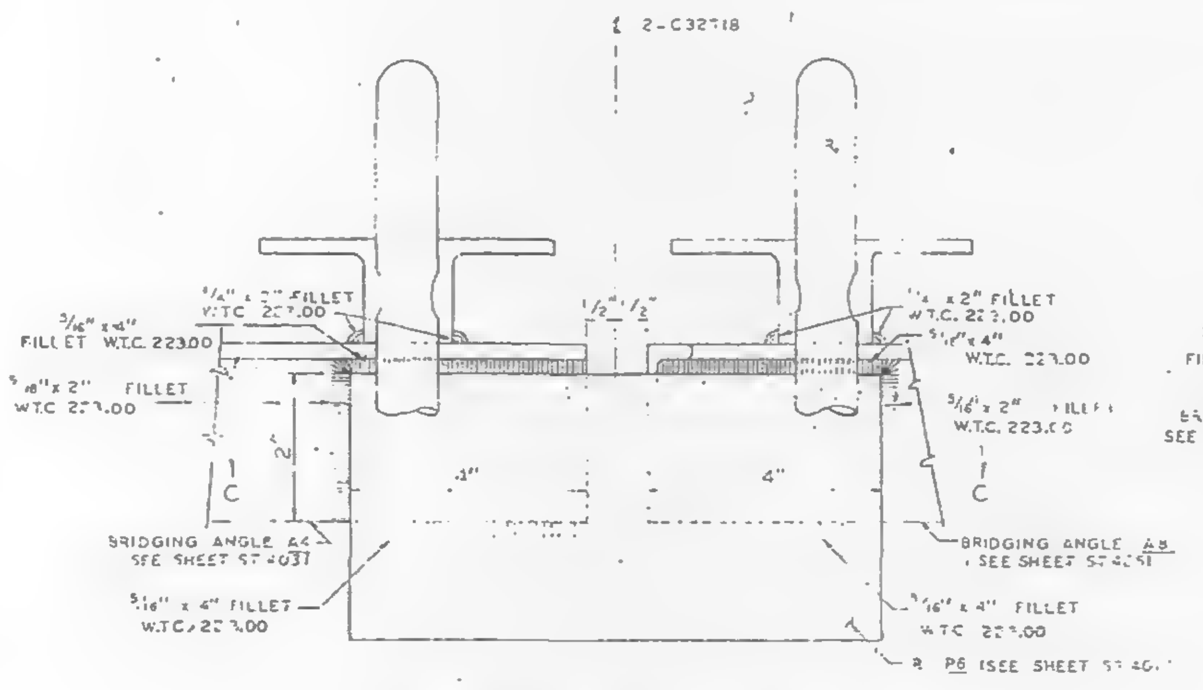
NO.	DATE	REVISION	BY


9" PATCH R
4-1/4" x 1 1/2" ARC WELDS
DETAIL C
24T12 (SEE DWG. BT212) OR 24T138 (SEE DWG BT2138)
DETAIL A
24" DEEP BRIDGING TRUSS
32" DEEP COMPOSITE TRUSSES
B.C. CLOSURE UNIT (SEE DWG. BT212)
DETAIL B
6"
32" DEEP COMPOSITE TRUSSES
BRIDGING TRUSS
SEE DETAIL D
SEE DETAIL F
SECTION G-G
SEE DETAIL E
SEE DETAIL D
SEE DETAIL F
SECTION F-F
1/4" GAP x 4" FILLET W.T.C. 230.00
3/8" x 2" + GAP FILLET W.T.C. 230.00
1/4" x 8" + GAP FILLET W.T.C. 230.00
BAR C6 (SEE SHEET ST400)
1/4" GAP x 4" FILLET W.T.C. 230.00
SEE SHEET ST400
DETAIL C
℄ TWO 32" DEEP COMPOSITE TRUSSES
24" BRIDGING TRUSS
1/4" (FILLET WELD-W.T.C. 230.00)
2" x 1 1/2" CLIP ANGLE (C1)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE R
BOTTOM CHORD 32" DEEP COMPOSITE TRUSSES.
SECTION A-A
B.C. CLOSURE UNIT LENGTH = 6'-6 1/2"
℄ TWO 32" DEEP COMPOSITE TRUSSES
24" DEEP TRUSS
2 1/2"
6"
CLIP ANGLE C1 TO BE REMOVED AFTER ERECTION. SEE SHEET CD 220, DETAIL 7-XC FOR REQ'D WELD.
1/4 x 6" BOTH SIDES (FILLET-W.T.C. 220.00)
B.C. CLOSURE UNIT
BOTTOM CHORD SPLICE R
DETAIL A
24T12 OR 24T138
1/4 FILLET
B.C. CLOSURE UNIT
SECTION B-B
1/4" x 5" EACH SIDE (FILLET WELD-W.T.C. 230.00)
24T12 OR 24T138
CLIP ANGLE (SEE SHEET CD220)
6"
8"
DETAIL B

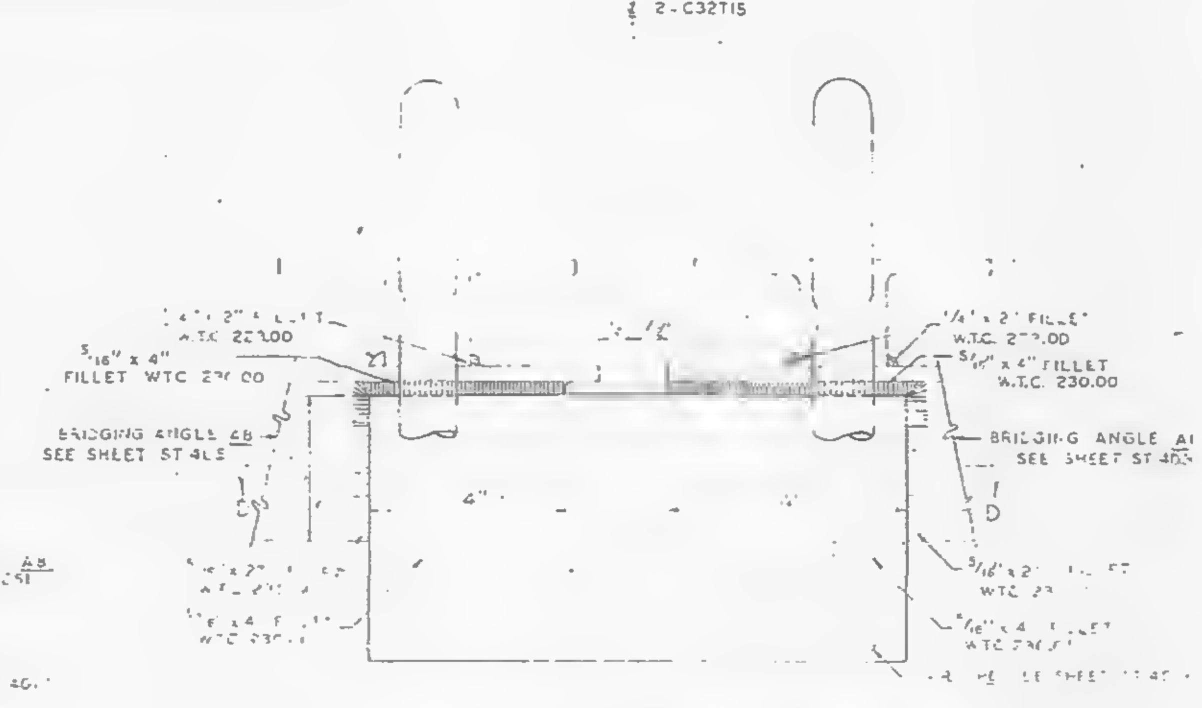
BRIDGING TRUSS CONNECTION (11-XC)



INTERIOR BRIDGING ANGLE CONNECTION (3-XC)

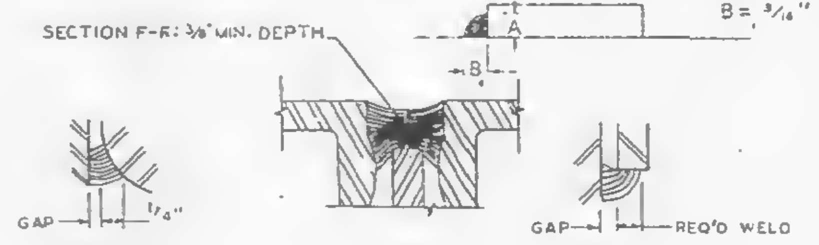

℄ 2-C32T18
3/16" x 4" FILLET W.T.C. 223.00
1/4" x 2" FILLET W.T.C. 223.00
3/16" x 2" FILLET W.T.C. 223.00
1/2" 1/2"
1/4" x 2" FILLET W.T.C. 223.00
3/16" x 4" W.T.C. 223.00
3/16" x 2" FILLET W.T.C. 223.00
4"
4"
C
C
BRIDGING ANGLE A4 SEE SHEET ST 4037
BRIDGING ANGLE A8 SEE SHEET ST 4037
3/16" x 4" FILLET W.T.C. 223.00
3/16" x 4" FILLET W.T.C. 223.00
R P6 (SEE SHEET ST 40..)

INTERIOR BRIDGING ANGLE CONNECTION (18XC)


℄ 2-C32T15
3/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A6 SEE SHEET ST 4..
1/4" x 2" FILLET W.T.C. 230.00
3/16" x 4" FILLET W.T.C. 230.00
BRIDGING ANGLE A1 SEE SHEET ST 4..
4"
D
D

PANEL JOINT BRIDGING ANGLE CONNECTION (19XC)

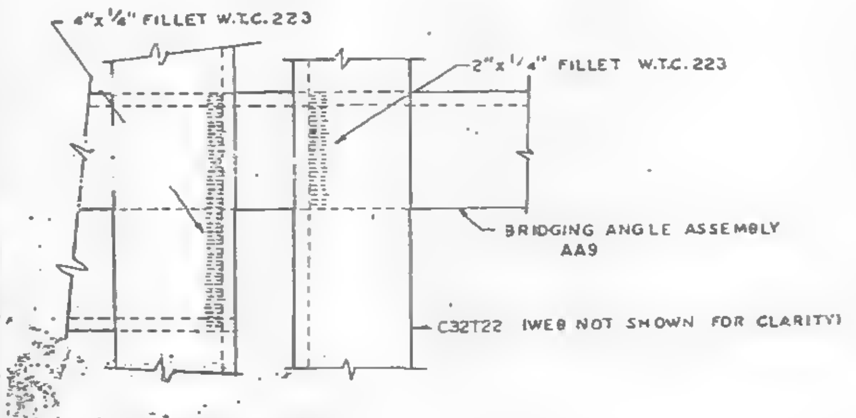
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



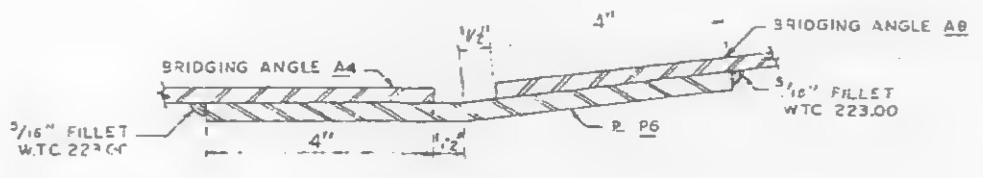
DETAIL D

DETAIL E

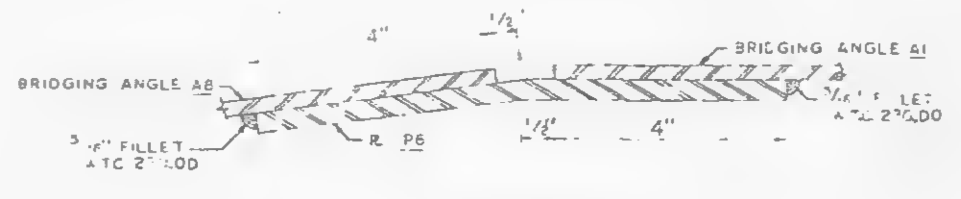
DETAIL F


4" x 1/4" FILLET W.T.C. 223
2" x 1/4" FILLET W.T.C. 223
BRIDGING ANGLE ASSEMBLY AA9
C32T22 (WEB NOT SHOWN FOR CLARITY)

SECTION E-E



SECTION C-C



SECTION D-D

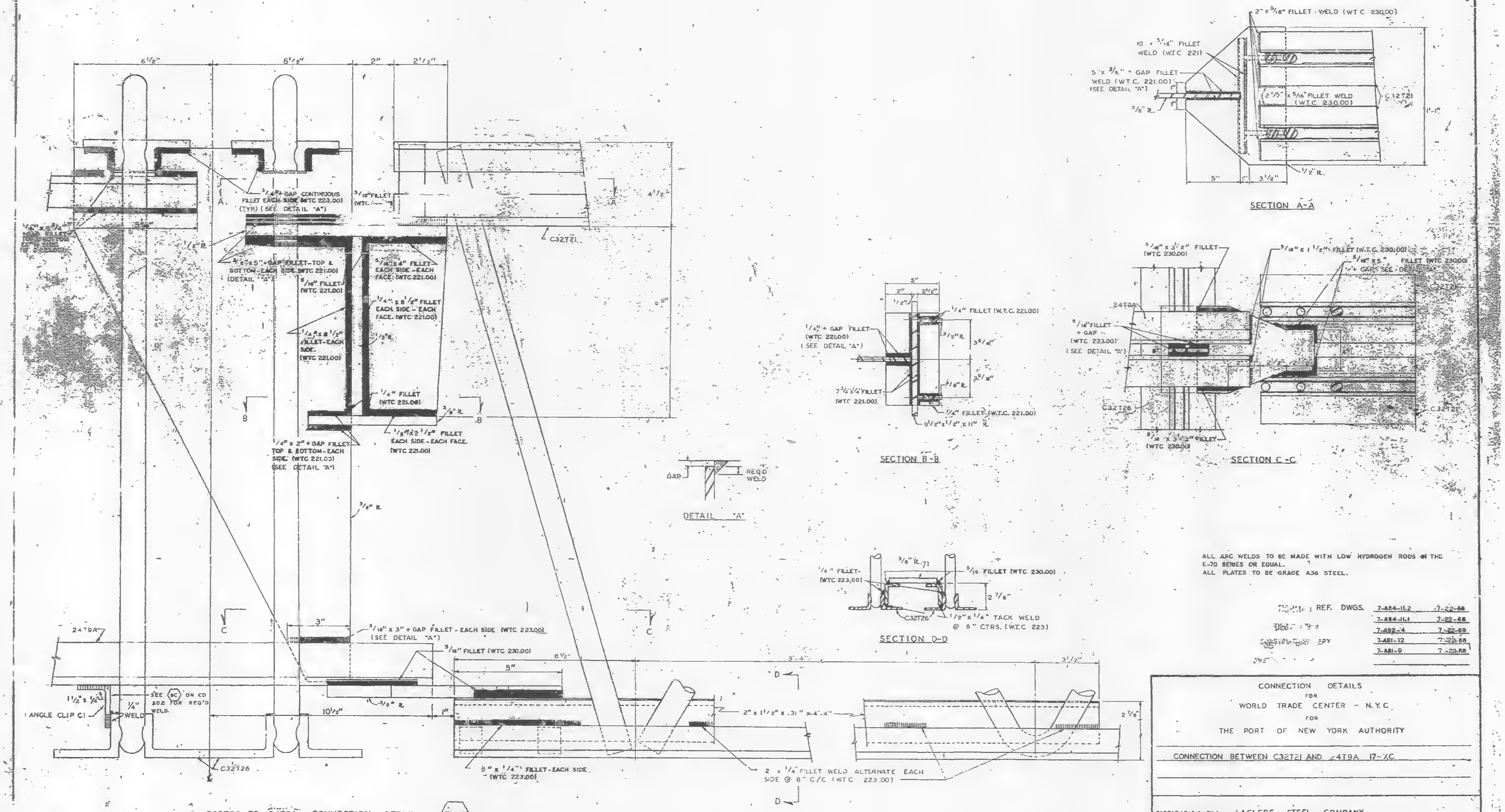
NO.	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 3-XC, 11-XC, 18-XC & 19-XC

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-A84-19 PLATE
APPROVED FOR FABRICATION BY White FOR PONYA DATE 1/31/69	DRAWN BY G.D.C. DATE 1-13-69
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY T.M. CHURA DATE 1-13-69
DETAILED BY A.C. WEBER	FABRICATION CONT. NO. WTC 221
IN CHARGE OF PROD. DEV.	SHEET NO. CD 223


6½"
6½"
2"
2½"
4½"
9"
¾" + GAP CONTINUOUS FILLET EACH SIDE (WTC 223.00) (TYP.) (SEE DETAIL "A")
5/16" FILLET (WTC
¼" x 5½" + GAP FILLET TOP & BOTTOM EACH SIDE (WTC 223.00)
5¾"
½" R
⅜" x 5" + GAP FILLET - TOP & BOTTOM - EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" FILLET (WTC 221.00)
5/16" x 4" FILLET - EACH SIDE - EACH FACE (WTC 221.00)
¼" x 8½" FILLET EACH SIDE - EACH FACE (WTC 221.00)
¼" x 8½" FILLET - EACH SIDE (WTC 221.00)
½" R
¼" FILLET (WTC 221.00)
⅜" R
⅛" x 2½" FILLET EACH SIDE - EACH FACE (WTC 221.00)
¼" x 2" + GAP FILLET TOP & BOTTOM - EACH SIDE (WTC 221.00) (SEE DETAIL "A")
⅜" R
A
B
C
C32T21
24T9A
3"
5/16" x 3" + GAP FILLET - EACH SIDE (WTC 223.00) (SEE DETAIL "A")
5/16" FILLET (WTC 230.00)
8½"
5"
⅜" R
1"
10½"
1½" x ¼"
¼" WELD
SEE 8C ON CD 202 FOR REQ'D WELD.
ANGLE CLIP C1
C32T26
5" x ¼" FILLET - EACH SIDE (WTC 223.00)
2" x 1½" x .31" x 4'-4"
2 x ¼" FILLET WELD ALTERNATE EACH SIDE @ 8" C/C (WTC 223.00)
3'-4"
3½"
2⅞"
D
C32T26 TO 24T9A CONNECTION DETAIL
17-XC
GAP
REQ'D WELD
DETAIL "A"
5"
2"
2½"
½"
¼" FILLET (W.T.C. 221.00)
¼" + GAP FILLET (WTC 221.00) (SEE DETAIL "A")
⅜" R
3 9/16"
3 9/16"
⅜" R
7¾" x ¼" FILLET (WTC 221.00)
¼" FILLET (W.T.C. 221.00)
8½" x ½" x 11" R
SECTION B-B
⅜" R
¼" FILLET (WTC 223.00)
5/16 FILLET (WTC 230.00)
2⅞"
C32T26
½" x ¼" TACK WELD @ 6" CTRS. (W.T.C. 223)
SECTION D-D
2" x 5/16" FILLET - WELD (W.T.C. 230.00)
10 x 5/16" FILLET WELD (W.T.C. 221)
5" x ⅜" + GAP FILLET WELD (W.T.C. 221.00) (SEE DETAIL "A")
1"
1"
⅜" R
2½" x 5/16" FILLET WELD (W.T.C. 230.00)
C32T21
1'-1"
½" R
5"
1"
3½"
SECTION A-A
5/16" x 3½" FILLET (WTC 230.00)
5/16" x 1½" FILLET (W.T.C. 230.00)
5/16" x 5" FILLET (WTC 230.00) + GAP SEE DETAIL "A"
24T9A
5/16" FILLET + GAP (WTC 223.00) (SEE DETAIL "A")
5
2
2½"
2½"
C32T21
C32T21
C32T26
5/16" x 3½" FILLET (WTC 230.00)
SECTION C-C

C32T26 TO 24T9A CONNECTION DETAIL (17-XC)

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.	
7-A84-11.2	7-22-68
7-A84-11.1	7-22-68
7-A82-4	7-22-68
7-A81-12	7-22-68
7-A81-9	7-22-68

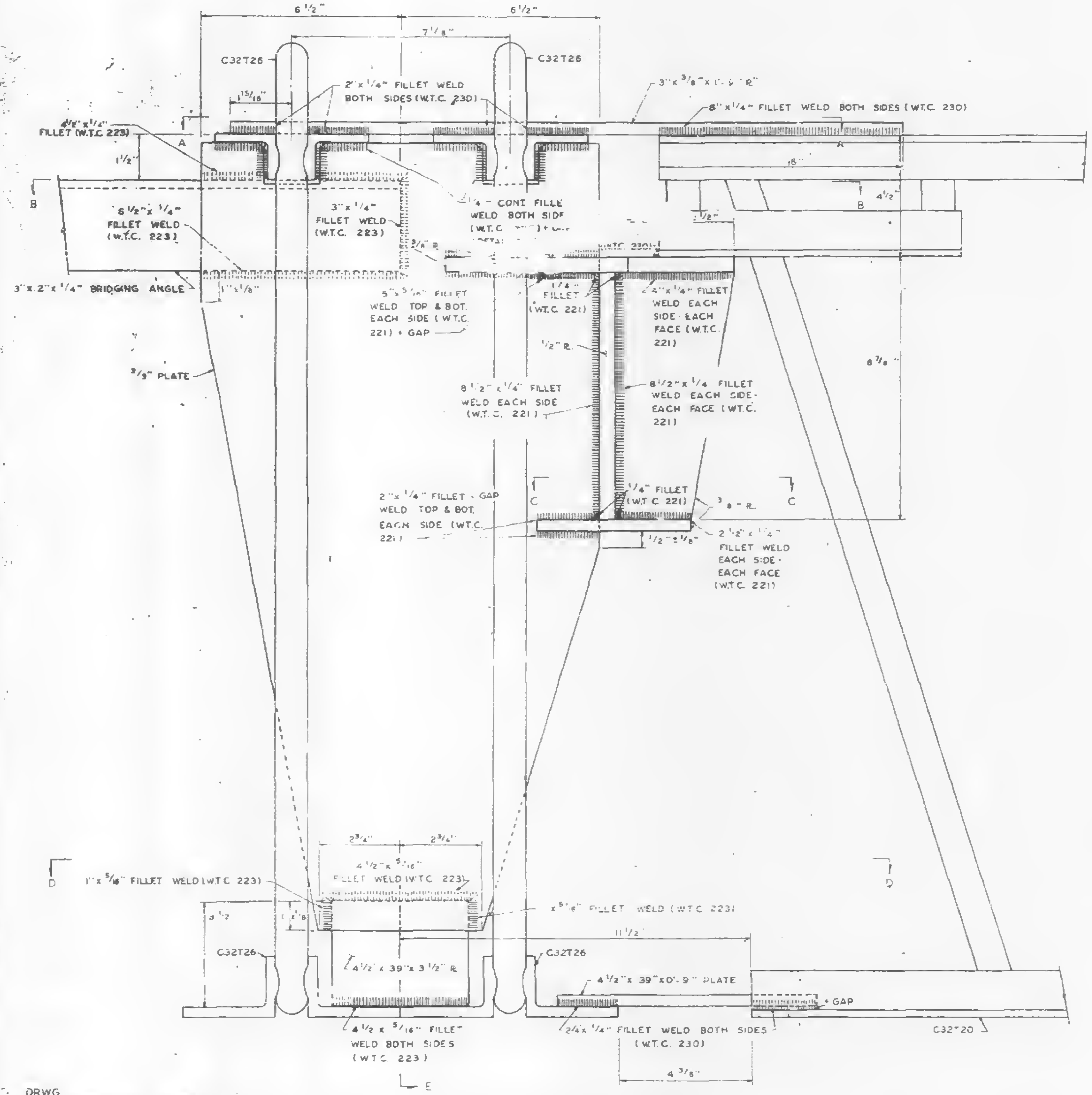
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T21 AND 24T9A 17-XC

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-11.2	PLATE
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY. DATE DEC 27 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.H. CHURA DATE DEC 27, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD-225

NO	DATE	REVISION	BY

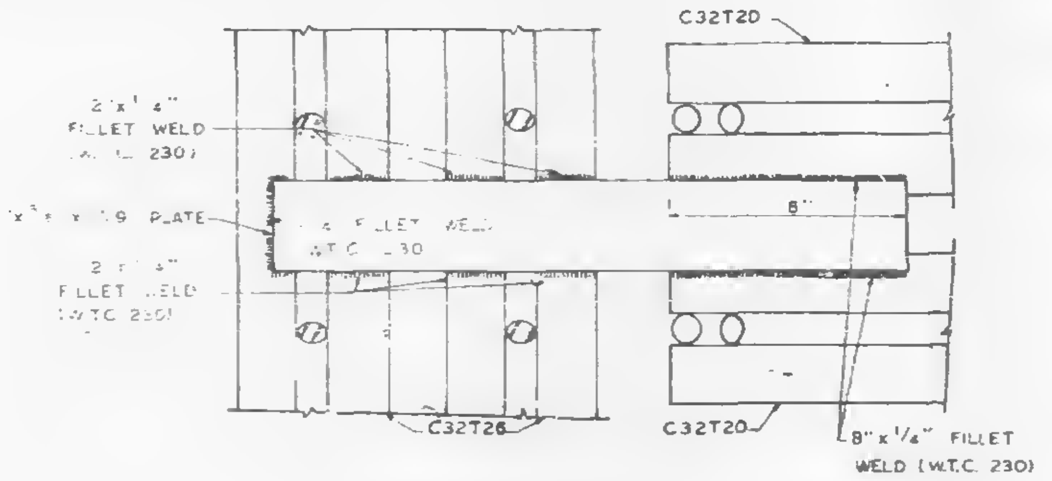

6 1/2"
6 1/2"
7 1/8"
C32T26
C32T26
1 15/16"
2" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
3" x 3/8" x 1'-9" R
8" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/2" x 1/4" FILLET (W.T.C. 223)
A
1 1/2"
B
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
3" x 1/4" FILLET WELD (W.T.C. 223)
1/4" CONT FILLET WELD BOTH SIDE (W.T.C.) + GAP DETAIL
3/8" R
(W.T.C. 230)
18"
A
B
4 1/2"
1/2"
3" x 2" x 1/4" BRIDGING ANGLE
1" x 1/8"
5" x 5/16" FILLET WELD TOP & BOT. EACH SIDE (W.T.C. 221) + GAP
1/4" FILLET (W.T.C. 221)
4" x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
1/2" R.
3/8" PLATE
8 7/8"
8 1/2" x 1/4" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2" x 1/4 FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
C
C
2" x 1/4" FILLET + GAP WELD TOP & BOT. EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" R.
1/2" ± 1/8"
2 1/2" x 1/4" FILLET WELD EACH SIDE EACH FACE (W.T.C. 221)
2 3/4"
2 3/4"
D
1" x 5/16" FILLET WELD (W.T.C. 223)
4 1/2" x 5/16" FILLET WELD (W.T.C. 223)
D
x 5/16" FILLET WELD (W.T.C. 223)
3 1/2
1" x 1/8"
11 1/2"
C32T26
C32T26
4 1/2" x 39" x 3 1/2" R
4 1/2" x 39" x 0'-9" PLATE
+ GAP
4 1/2 x 5/16" FILLET WELD BOTH SIDES (W.T.C. 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
C32T20
4 3/8"
E

DRWG.

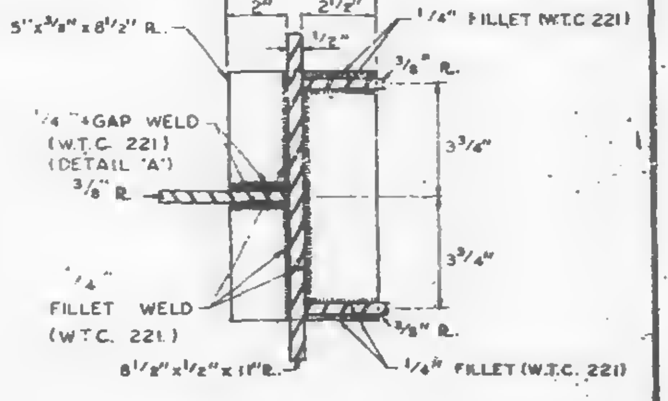
7-A84-11.3 7-22-68 7/??/68
7-A84-13.2 6-15-68 ?/?/68
7-A81-8 7-22-68 7/2?/68
7-A81-12 7-22-68 7/22/68

C32T26 TO 3" x 2" CONNECTION DETAIL 14-XC

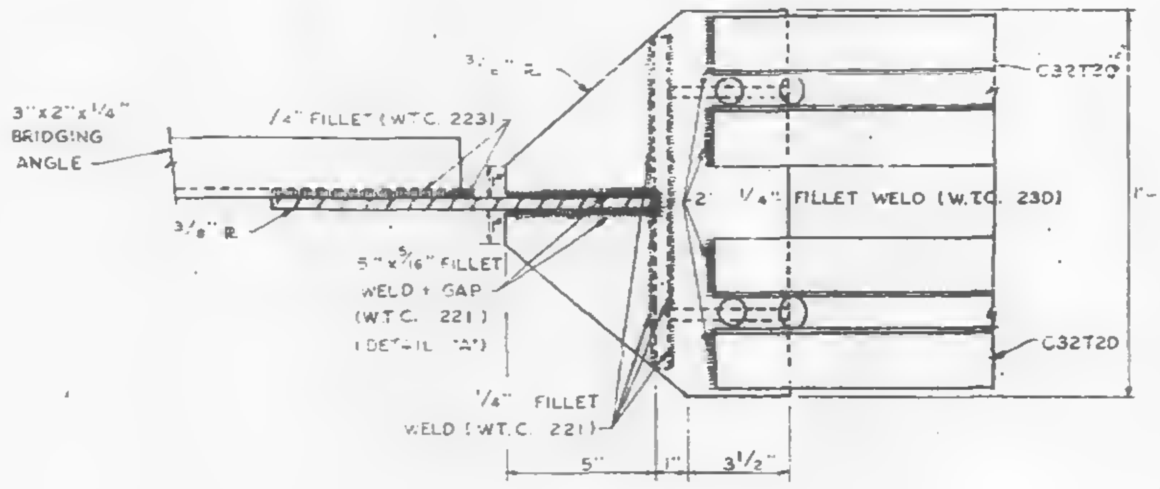
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A36.


C32T20
2" x 1/4" FILLET WELD (W.T.C. 230)
PLATE
1/4" FILLET WELD W.T.C. 230
2" x 1/4" FILLET WELD (W.T.C. 230)
8"
C32T26
C32T20
8" x 1/4" FILLET WELD (W.T.C. 230)

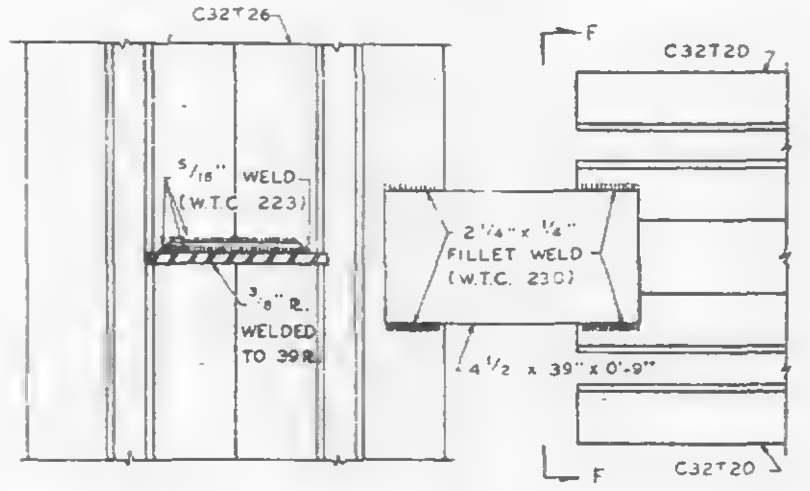
SECTION A-A



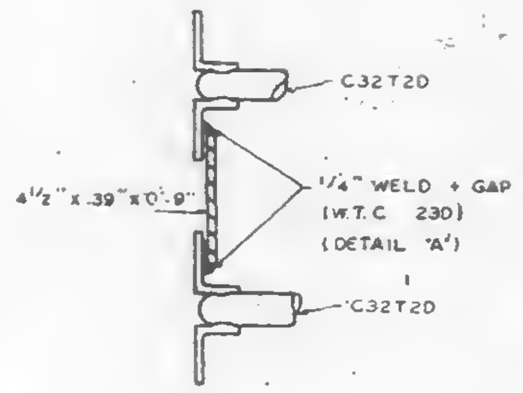
SECTION C-C


3/8" R
C32T20
3" x 2" x 1/4" BRIDGING ANGLE
1/4" FILLET (W.T.C. 223)
2
1/4" FILLET WELD (W.T.C. 230)
1'-1"
3/8" R
5" x 5/16" FILLET WELD + GAP (W.T.C. 221) (DETAIL 'A')
C32T20
1/4" FILLET WELD (W.T.C. 221)
5"
1"
3 1/2"

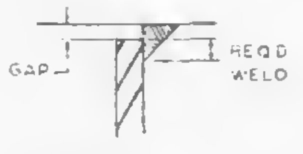
SECTION B-B



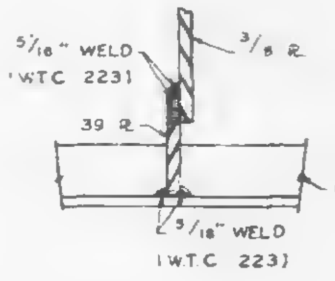
SECTION D-D



SECTION F-F



DETAIL 'A'



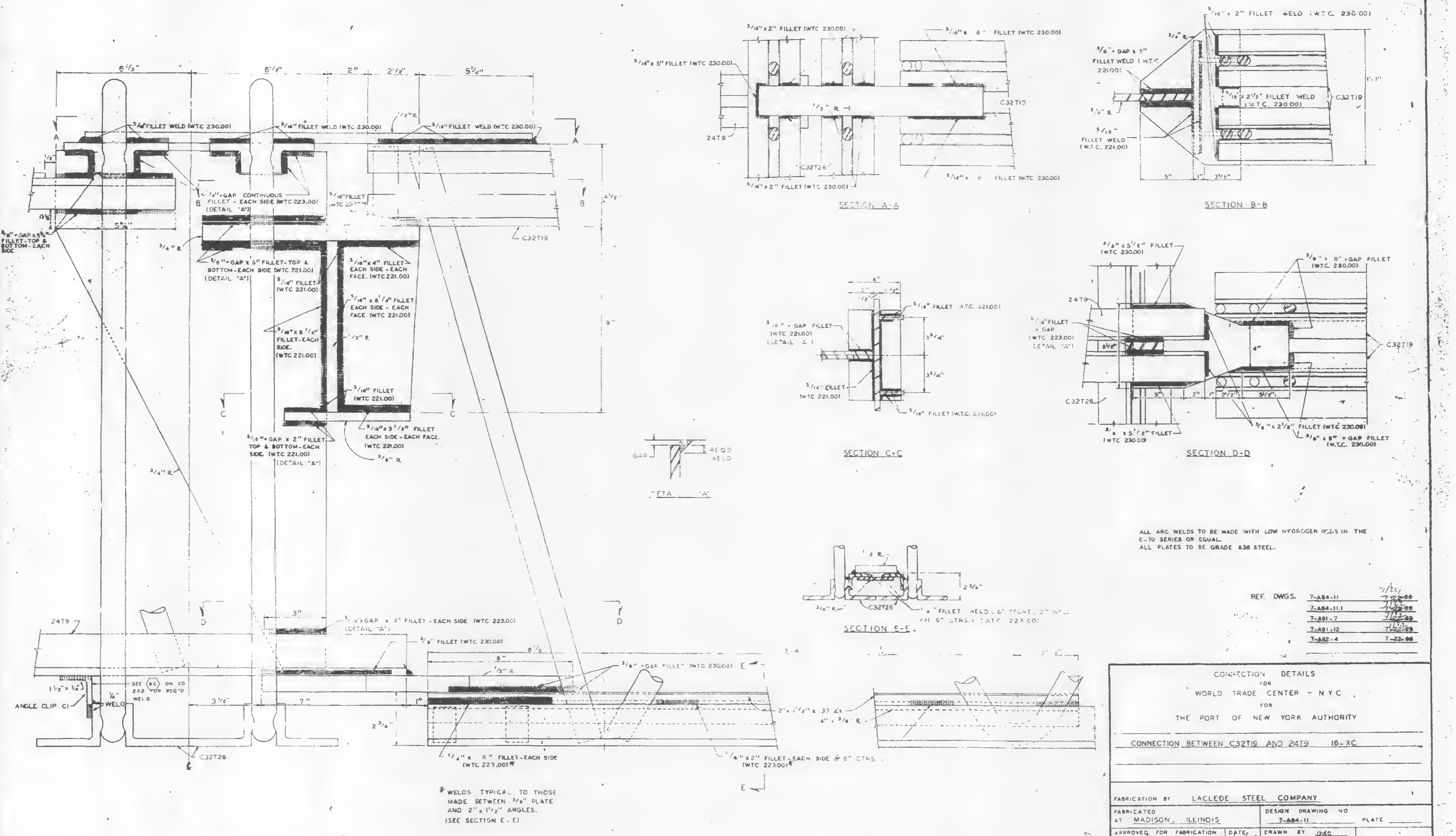
SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T20 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-XC

NO	DATE	REVISION	BY

FABRICATION BY: LACLEDE STEEL COMPANY			1
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13.1 7-22-68 PLATE	
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: DATE DEC 27, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: DEC. 27, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD-226


6 1/2"
6 1/2"
2"
2 1/2"
5 1/2"
1/2" R
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
5/16" FILLET WELD (WTC 230.00)
A
A
1/2
1/4" + GAP CONTINUOUS FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
5/16" FILLET (WTC 230.00)
B
B
4 1/2"
1 3/8
5 3/4"
3/8" + GAP x 5 3/4" FILLET-TOP & BOTTOM-EACH SIDE
3/4" R
C32T19
3/8" + GAP x 5" FILLET-TOP & BOTTOM-EACH SIDE (WTC 221.00) (DETAIL "A")
5/16" x 4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" FILLET (WTC 221.00)
5/16" x 8 1/4" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
5/16" x 8 1/4" FILLET-EACH SIDE. (WTC 221.00)
1/2" R
9"
5/16" FILLET (WTC 221.00)
C
C
5/16" + GAP x 2" FILLET TOP & BOTTOM-EACH SIDE. (WTC 221.00) (DETAIL "A")
5/16" x 3 1/2" FILLET EACH SIDE - EACH FACE. (WTC 221.00)
3/8" R
3/4" R
5/16" x 2" FILLET (WTC 230.00)
5/16" x 5" FILLET (WTC 230.00)
5/16" x 8" FILLET (WTC 230.00)
1/2" R
C32T19
24T9
C32T26
5/16" x 8" FILLET (WTC 230.00)
5/16" x 2" FILLET (WTC 230.00)
SECTION A-A
5/16" x 2" FILLET WELD (W.T.C. 230.00)
3/4" R
3/8" + GAP x 5" FILLET WELD (W.T.C. 221.00)
5/16" x 2 1/2" FILLET WELD (W.T.C. 230.00)
C32T19
1'-1"
3/4" R
5/16" FILLET WELD (W.T.C. 221.00)
5"
1"
3 1/2"
SECTION B-B
6"
2"
3 1/2"
1/2"
5/16" FILLET W.T.C. 221.00
5/16" + GAP FILLET (WTC 221.00) (DETAIL "A")
3 9/16"
3 5/16"
5/16" FILLET (WTC 221.00)
5/16" FILLET (W.T.C. 221.00)
SECTION C-C
GAP
REQ'D WELD
DETAIL "A"
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8" x 8" + GAP FILLET (W.T.C. 230.00)
24T9
5/16" FILLET + GAP (WTC 223.00) DETAIL "A"
8 1/2"
4"
C32T19
C32T26
5"
2"
1"
2 1/2"
5 1/2"
3/8" x 5 1/2" FILLET (WTC 230.00)
3/8" x 2 1/2" FILLET (WTC 230.00)
3/8" x 8" + GAP FILLET (W.T.C. 230.00)
SECTION D-D
D
D
24T9
3"
5/16" + GAP x 3" FILLET - EACH SIDE (WTC 223.00) (DETAIL "A")
3/8" FILLET (WTC 230.00)
6 1/2"
8"
1/2" R
3/8" + GAP FILLET (WTC 230.00)
E
1 1/2" x 1/4"
SEE 8C ON CD 202 FOR REQ'D WELD
1/4" WELD
ANGLE CLIP C1
3 1/2"
7"
1"
2 3/4"
C32T26
1/4" x 6" FILLET-EACH SIDE (WTC 223.00)*
2" x 1 1/2" x .37 ∠s
4" x 3/8" R
1/4" x 2" FILLET-EACH SIDE @ 6" CTRS. (WTC 223.00)*
E
1/2 R
2 3/4"
3/16" R
C32T26
1/4" FILLET WELD (6" START, 2" WELD ON 6" CTRS.) (WTC 223.00)
SECTION E-E

* WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E-E)

C32T26 TO 24T9 CONNECTION DETAIL 16-XC

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

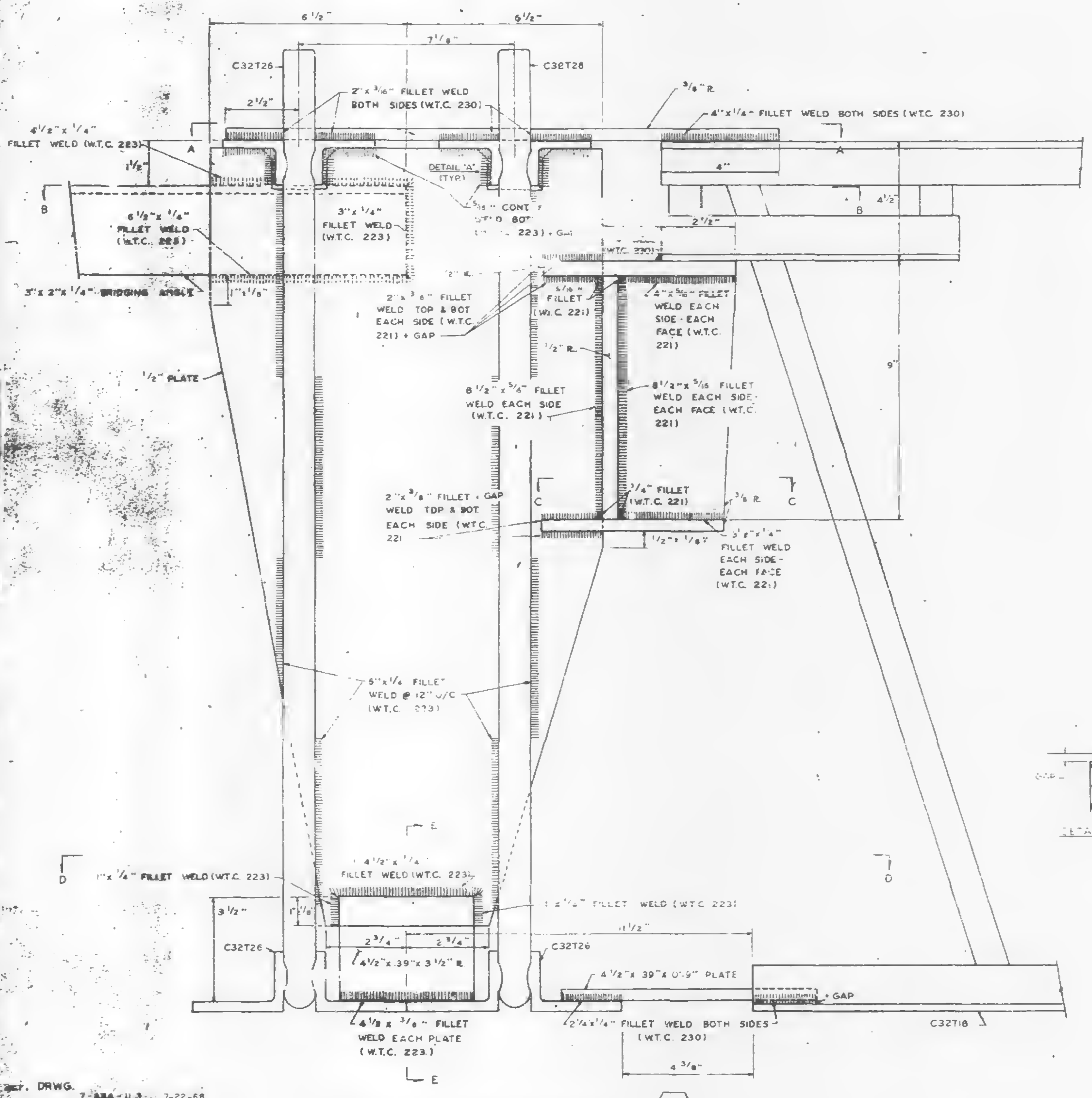
REF. DWGS.		
	7-A84-11	~~7-22-68~~ 7/26
	7-A84-11.1	~~7-22-68~~ 7/22
	7-A81-7	~~7-22-69~~ 7/22
	7-A81-12	~~7-22-69~~ 7/22
	7-A82-4	7-22-68

NO	DATE	REVISION	BY

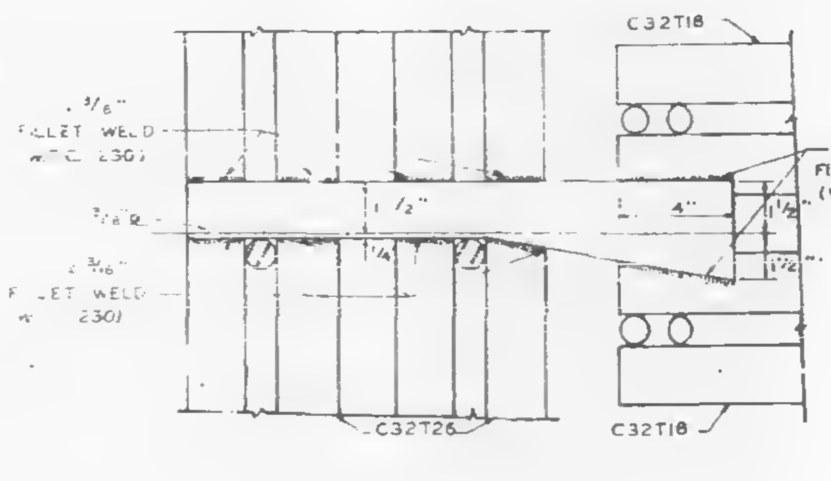
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T19 AND 24T9 16-XC

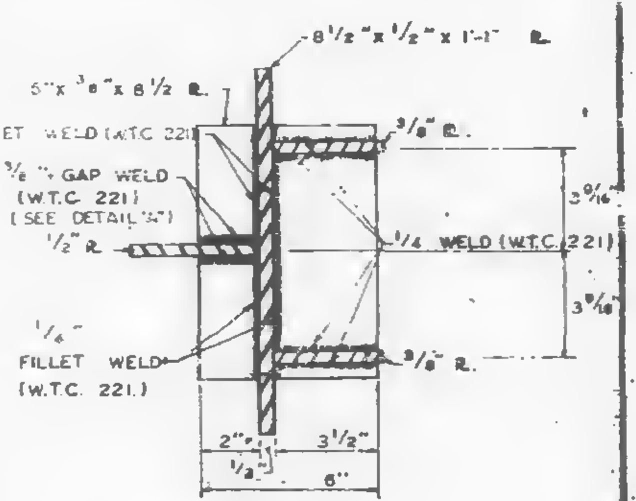
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-A84-11 PLATE
APPROVED FOR FABRICATION BY James [illegible] FOR PONYA DATE 1/31/69
DRAWN BY gdc DATE DEC. 27, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M. CHURA DATE DEC. 27, 1968
IN CHARGE OF PROD DEV.
DETAILED BY E.C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO CD-227


6 1/2"
6 1/2"
7 1/8"
C32T26
C32T28
2 1/2"
2" x 3/16" FILLET WELD BOTH SIDES (W.T.C. 230)
3/8" R
4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1 1/2"
A
A
DETAIL "A" (TYP)
4"
B
B
6 1/2" x 1/4" FILLET WELD (W.T.C. 223)
3" x 1/4" FILLET WELD (W.T.C. 223)
4 1/2"
2 1/2"
3" x 2" x 1/4" BRIDGING ANGLE
2" x 3/8" FILLET WELD TOP & BOT EACH SIDE (W.T.C. 221) + GAP
5/16" FILLET (W.T.C. 221)
4" x 5/16" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
1/2" R
1/2" PLATE
8 1/2" x 5/16" FILLET WELD EACH SIDE (W.T.C. 221)
8 1/2" x 5/16" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
9"
2" x 3/8" FILLET + GAP WELD TOP & BOT EACH SIDE (W.T.C. 221)
1/4" FILLET (W.T.C. 221)
3/8" R
C
C
1/2" x 1/8"
3" x 1/4" FILLET WELD EACH SIDE - EACH FACE (W.T.C. 221)
5" x 1/4 FILLET WELD @ 12" C/C (W.T.C. 223)
E
D
D
1" x 1/4" FILLET WELD (W.T.C. 223)
4 1/2" x 1/4" FILLET WELD (W.T.C. 223)
1" x 1/4" FILLET WELD (W.T.C. 223)
3 1/2"
11 1/2"
2 3/4"
2 3/4"
C32T26
C32T26
4 1/2" x 39" x 3 1/2" R
4 1/2" x 39" x 0'-9" PLATE
GAP
C32T18
4 1/2" x 3/8" FILLET WELD EACH PLATE (W.T.C. 223)
2 1/4" x 1/4" FILLET WELD BOTH SIDES (W.T.C. 230)
4 3/8"
E

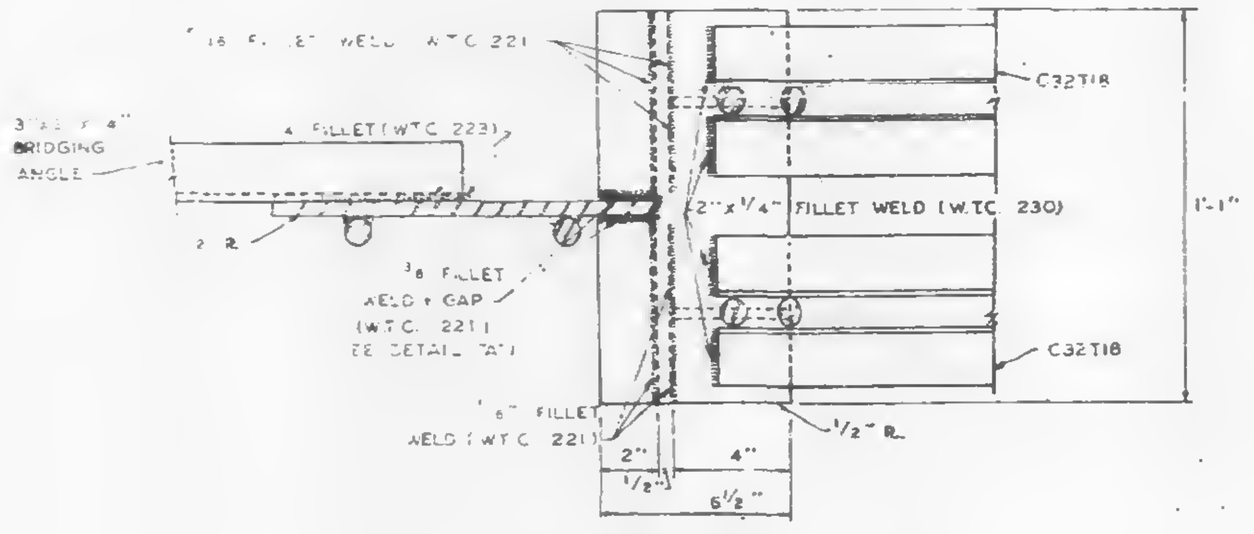
C32T18 TO 3" x 2" CONNECTION DETAIL 13-XC


C32T18
3/8" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET WELD (W.T.C. 230)
1/2"
4"
3/8" R
2 3/8" FILLET WELD (W.T.C. 230)
C32T26
C32T18

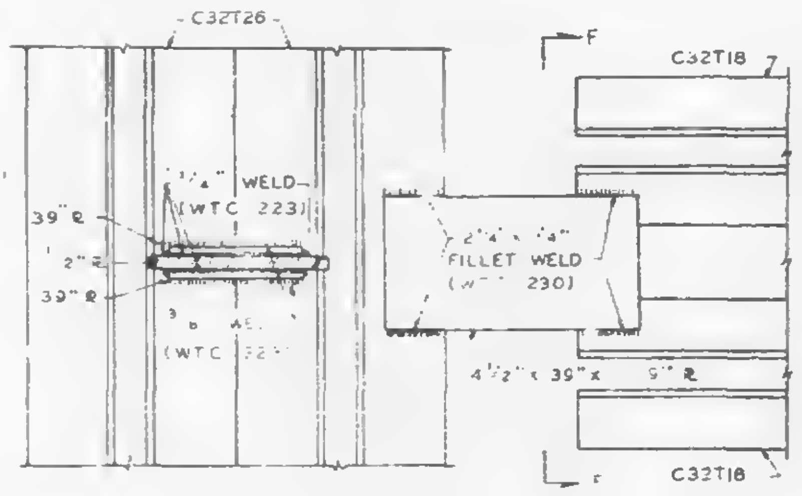
SECTION A-A



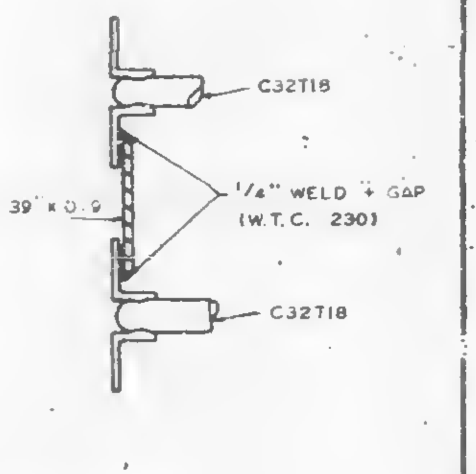
SECTION C-C


1/4 FILLET WELD (W.T.C. 221)
C32T18
3" x 2" x 1/4" BRIDGING ANGLE
1/4 FILLET (W.T.C. 223)
2" x 1/4" FILLET WELD (W.T.C. 230)
1'-1"
2 R
3/8 FILLET WELD + GAP (W.T.C. 221) SEE DETAIL "A"
C32T18
1/4" FILLET WELD (W.T.C. 221)
1/2" R
2"
4"
1/2"
6 1/2"

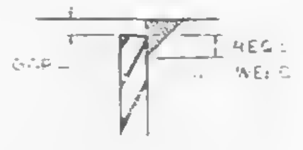
SECTION B-B



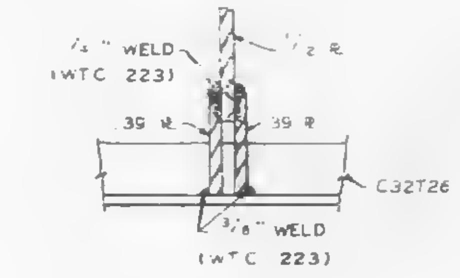
SECTION D-D



SECTION F-F



DETAIL "A"



SECTION E-E

REF. DRWG.
7-A84-11-3 7-22-68
7-A81-11-2 6-15-68
7-A81-13 7-22-68
7-A81-18 7-22-68

NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A36.

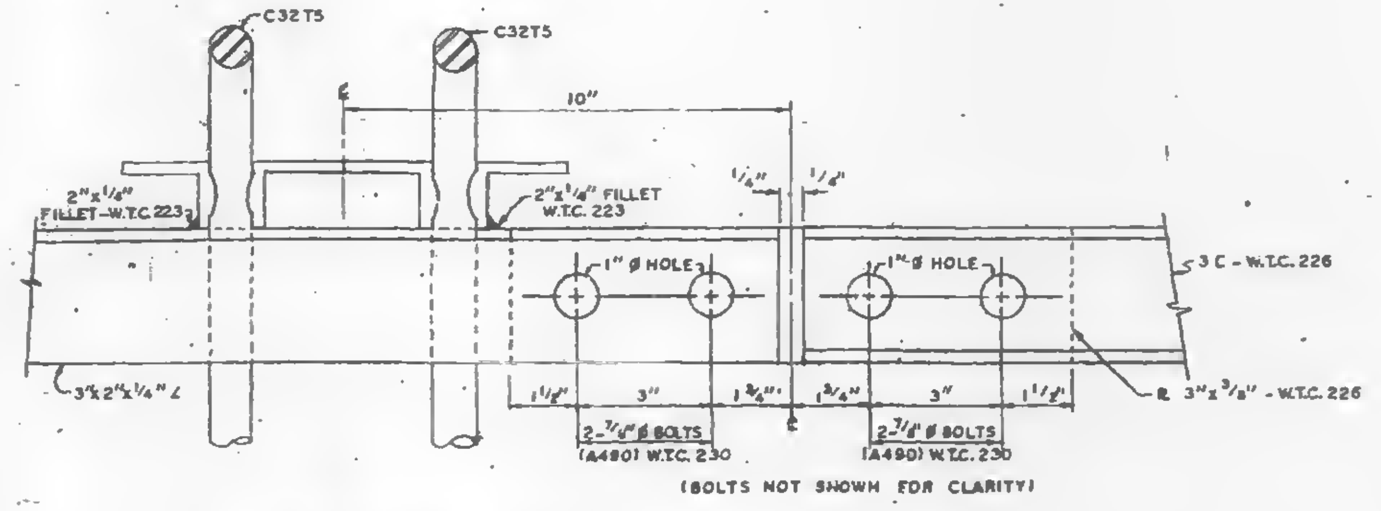
NO	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

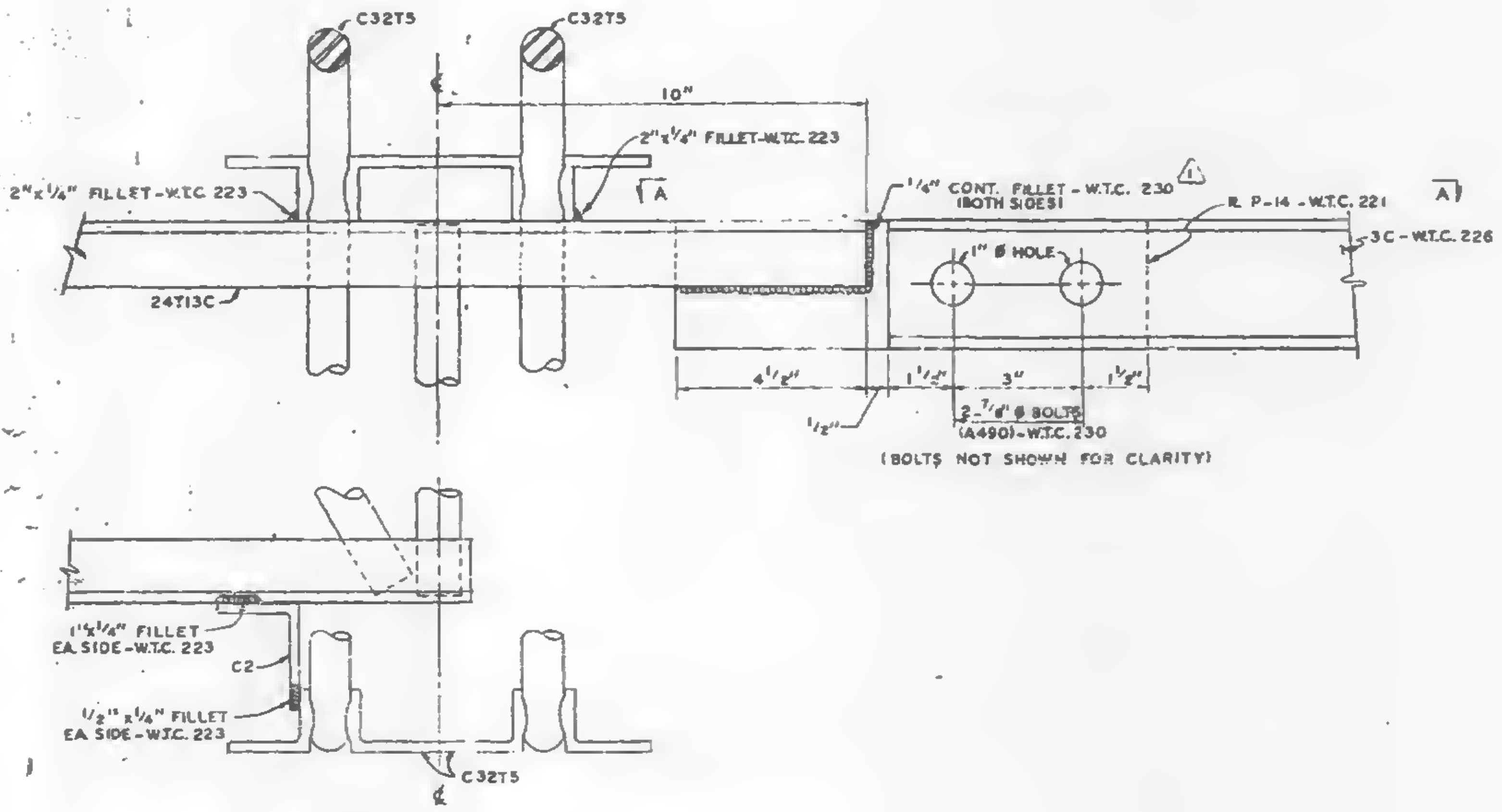
C32T18 CONNECTING TO 3" x 2" BRIDGING ANGLE DETAIL 13-XC

FABRICATION BY: LACLEDE STEEL COMPANY

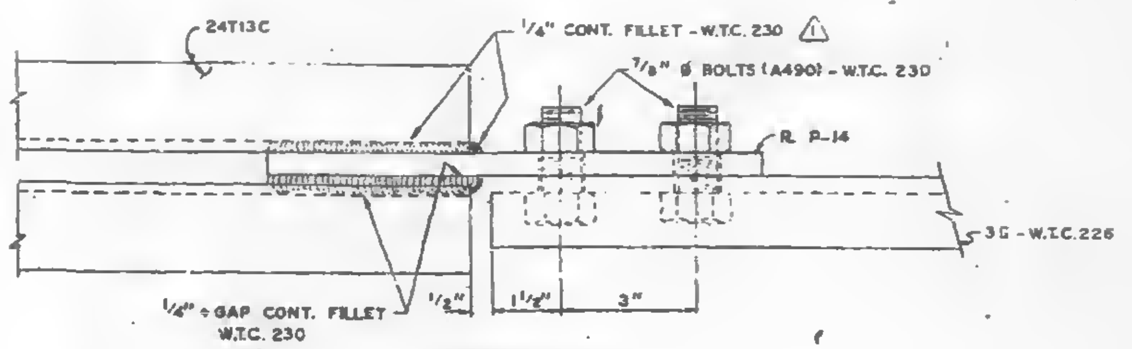
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13 7-22-68 PLATE	
APPROVED FOR FABRICATION BY James White FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: [illegible] DATE: DEC. 27, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: DEC. 27, 1968	IN CHARGE OF: PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD-228


C32T5
C32T5
10"
2"x1/4" FILLET-W.T.C. 223
2"x1/4" FILLET W.T.C. 223
1/4"
1/4"
1" ⌀ HOLE
1" ⌀ HOLE
3 C - W.T.C. 226
3"x2"x1/4" ∠
1 1/2"
3"
1 3/4"
1 3/4"
3"
1 1/2"
2 - 7/8" ⌀ BOLTS (A490) W.T.C. 230
2 - 7/8" ⌀ BOLTS (A490) W.T.C. 230
(BOLTS NOT SHOWN FOR CLARITY)
℞ 3"x3/8" - W.T.C. 226

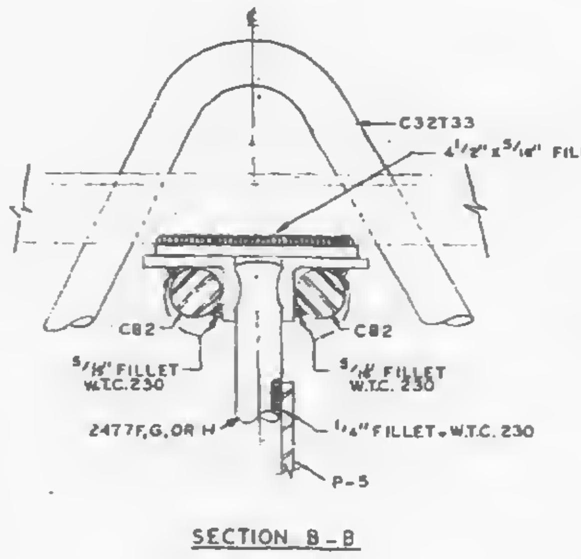
PANEL JOINT CONNECTION (1-A)
PANELS: M1, MR1, C6, CR6, C7 & CR7
⚠1


C32T5
C32T5
10"
2"x1/4" FILLET-W.T.C. 223
2"x1/4" FILLET-W.T.C. 223
A
1/4" CONT. FILLET - W.T.C. 230 (BOTH SIDES)
A
℞ P-14 - W.T.C. 221
1" ⌀ HOLE
3C - W.T.C. 226
24T13C
4 1/2"
1 1/2"
3"
1 1/2"
1/2"
2 - 7/8" ⌀ BOLTS (A490) - W.T.C. 230
(BOLTS NOT SHOWN FOR CLARITY)
1 1/2"x1/4" FILLET EA. SIDE - W.T.C. 223
C2
1/2"x1/4" FILLET EA. SIDE - W.T.C. 223
C32T5

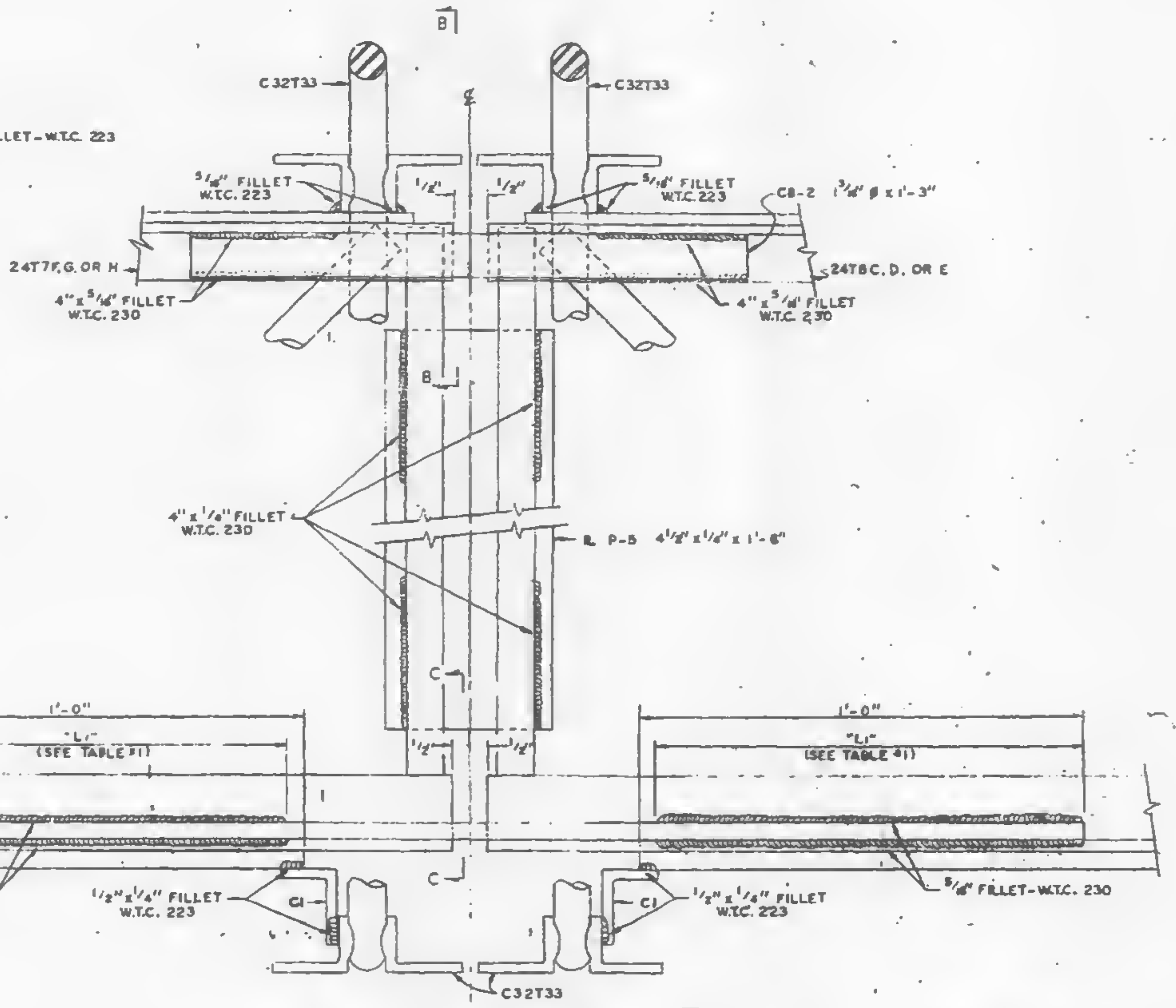
PANEL JOINT CONNECTION (2-A)
PANEL: M1, MR1, C6, CR6, C7 & CR7
⚠1


24T13C
1/4" CONT. FILLET - W.T.C. 230 ⚠1
7/8" ⌀ BOLTS (A490) - W.T.C. 230
℞ P-14
3C - W.T.C. 226
1/4" + GAP CONT. FILLET W.T.C. 230
⚠1
1/2"
1 1/2"
3"

SECTION A-A



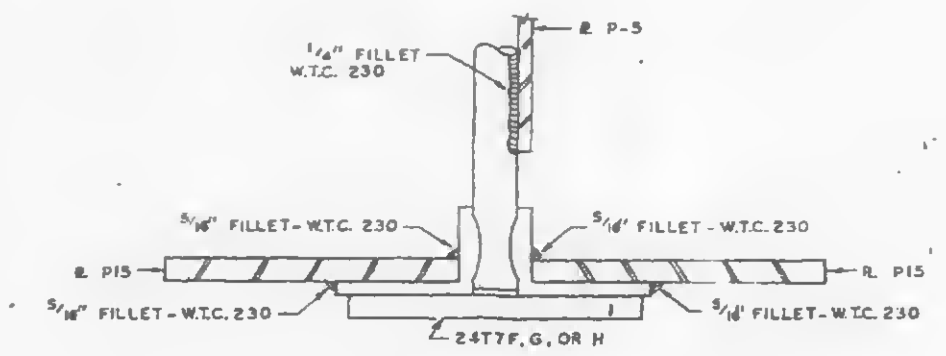
SECTION B-B



⚠1 PANEL JOINT CONNECTION (20-C)
PANELS: E3, ER3, E8, ER8, F3, FR3, F8, & FR8.

TABLE #1

CONNECTED TRUSSES	"L1"
24T7F TO 24T8C	1'-0"
24T7G TO 24T8D	1'-3"
24T7H TO 24T8E	1'-1 1/2" ⚠1


℞ P-5
1/4" FILLET W.T.C. 230
5/16" FILLET - W.T.C. 230
5/16" FILLET - W.T.C. 230
℞ P15
℞ P15
5/16" FILLET - W.T.C. 230
5/16" FILLET - W.T.C. 230
24T7F, G, OR H

SECTION C-C ⚠1

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

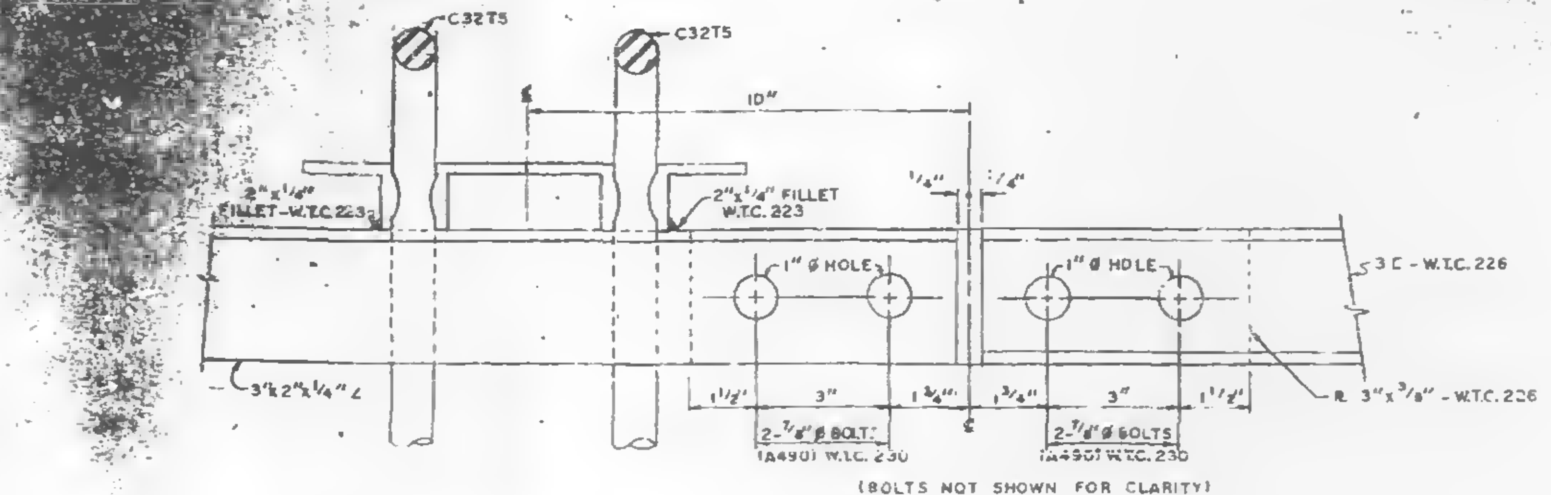
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 1-A, 2-A & 20-C.

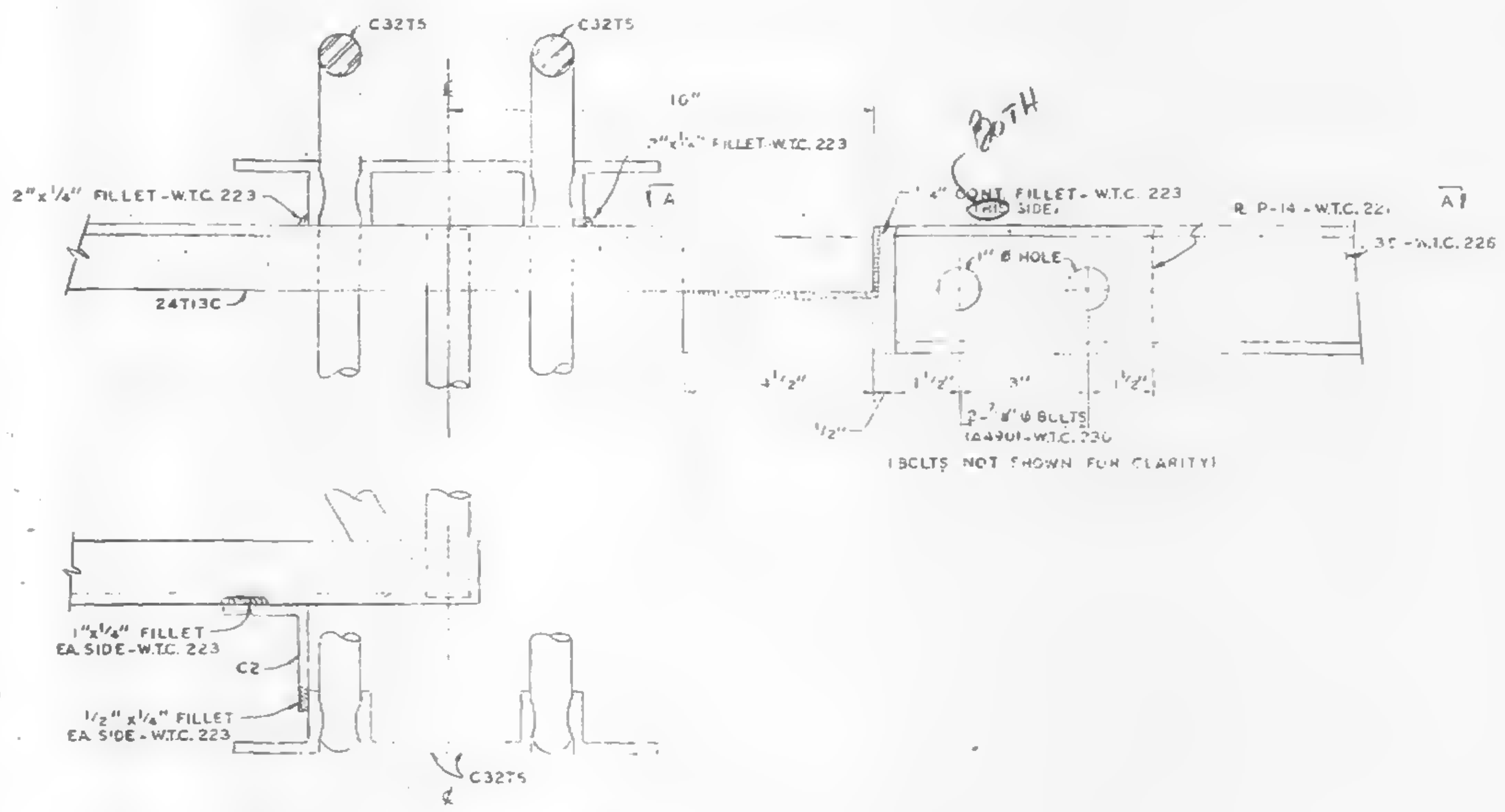
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A.	DATE 4/15/69	DRAWN BY: gcz DATE MARCH 20, 1969	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.H. CHURA DATE MARCH 20, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY: LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 229

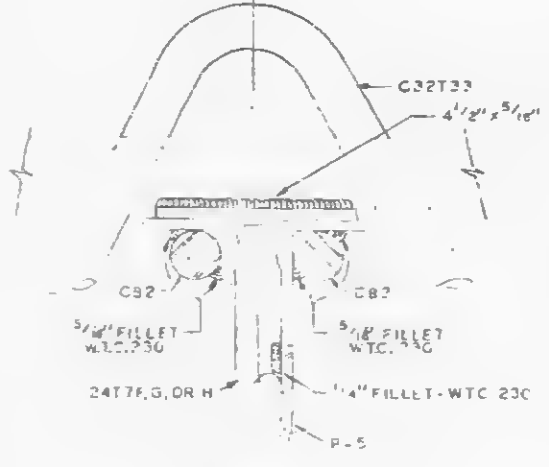
NO.	DATE	REVISION	BY
⚠1	4-16-69	AS NOTED	G.D.C.


C32T5
C32T5
10"
2"x1/4" FILLET-W.T.C. 223
2"x1/4" FILLET W.T.C. 223
1/4"
1/4"
1" Ø HOLE
1" Ø HOLE
3 E - W.T.C. 226
3"x2"x1/4" ∠
1 1/2"
3"
1 3/4"
1 3/4"
3"
1 1/2"
R 3"x3/8" - W.T.C. 226
2-7/8" Ø BOLTS (A490) W.T.C. 230
2-7/8" Ø BOLTS (A490) W.T.C. 230
(BOLTS NOT SHOWN FOR CLARITY)

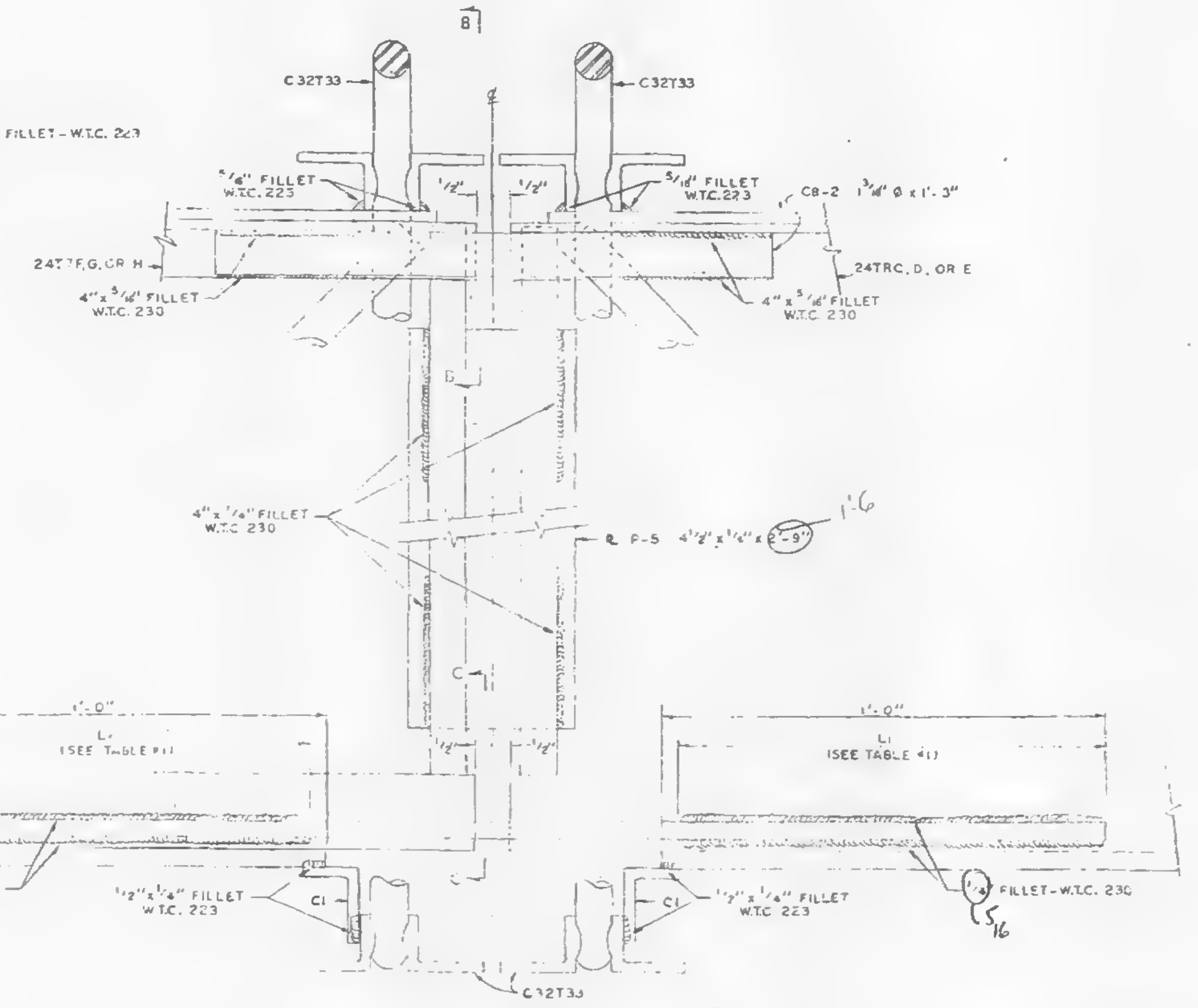
PANEL JOINT CONNECTION 1-A
PANELS: M1 & MR1


C32T5
C32T5
10"
2"x1/4" FILLET-W.T.C. 223
2"x1/4" FILLET-W.T.C. 223
A
1/4" CONT. FILLET-W.T.C. 223 THIS SIDE
BOTH
R P-14 - W.T.C. 226
A
3E - W.T.C. 226
1" Ø HOLE
24T13C
4 1/2"
1 1/2"
3"
1 1/2"
1/2"
2-7/8" Ø BOLTS (A490)-W.T.C. 230
(BOLTS NOT SHOWN FOR CLARITY)
1"x1/4" FILLET EA. SIDE-W.T.C. 223
C2
1/2"x1/4" FILLET EA. SIDE-W.T.C. 223
C32T5

PANEL JOINT CONNECTION 2-A
PANEL: M1 & MR1



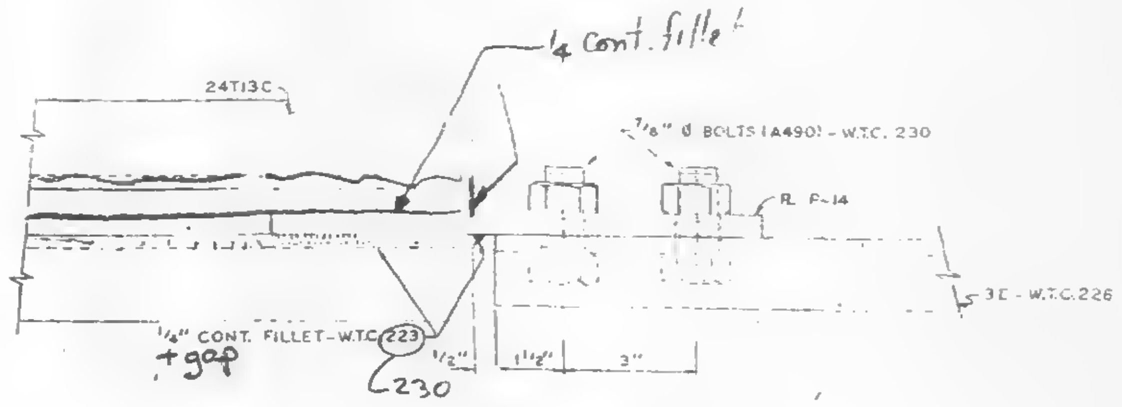
SECTION B-B



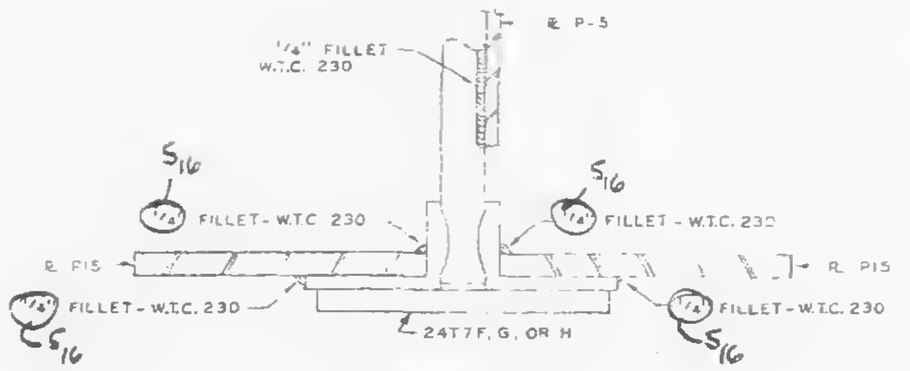
PANEL JOINT CONNECTION 20-C
PANELS: E3, ER3, E8, ER8, F3, FR3, F8, & FR8.

TABLE #1

CONNECTED TRUSSES	L1
24T7F TO 24T8C	10" 1'-0
24T7G TO 24T8D	1'1" 1'-3
24T7H TO 24T8E	11 1/2" 1'-1 1/2



SECTION A-A



SECTION C-C

CORRECTED
4/10/69 SK

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

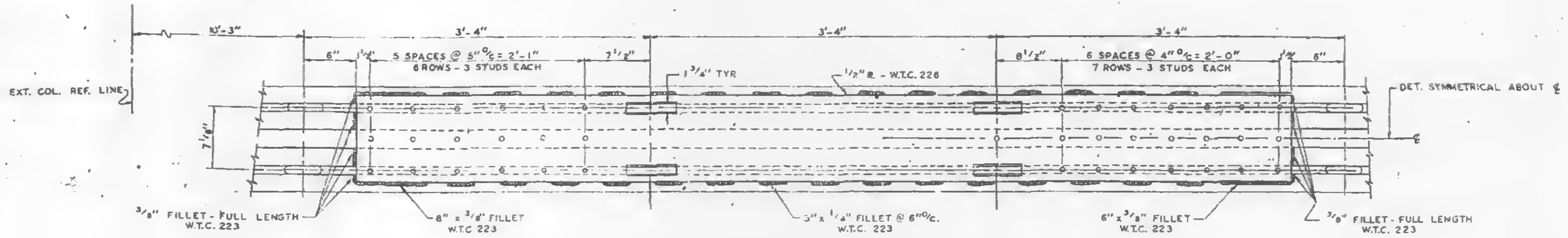
CONNECTION DETAILS 1-A, 2-A & 20-C.

FABRICATION BY LACLEDE STEEL COMPANY

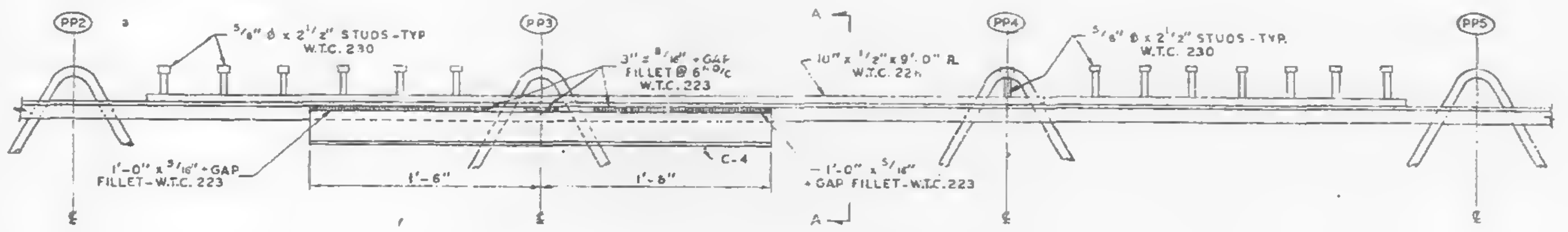
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. — DATE	DRAWN BY: gdc DATE MARCH 20, 1969	
APPROVED FOR FABRICATION BY: FOR FABRICATOR — DATE	CHECKED BY: T.M.CHURA DATE MARCH 20, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 229

LACLEDE STEEL CO.

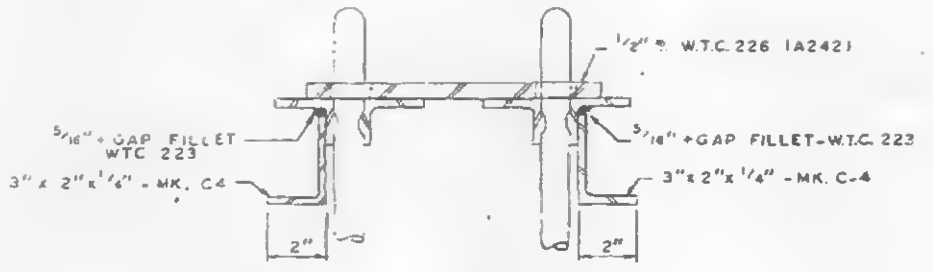
NO.	DATE	REVISION	BY



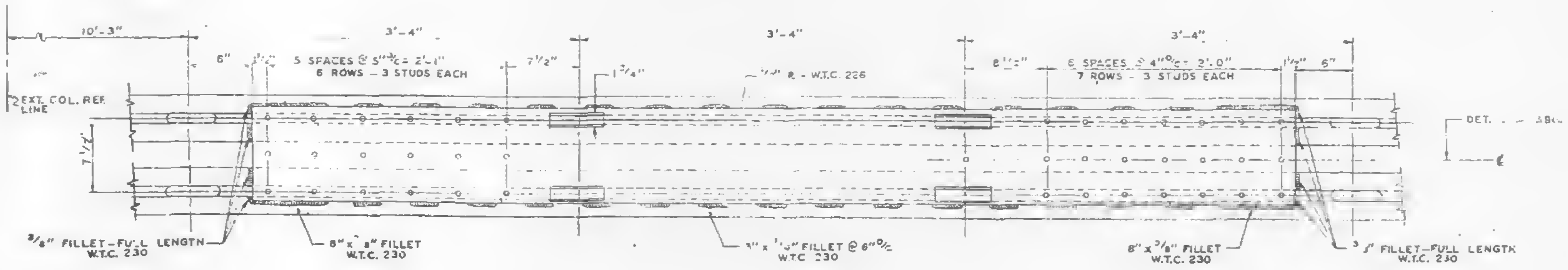
INTERIOR PANEL CONNECTION (3-A)
PANELS: A8



ELEVATION OF CONNECTIONS (3-A) & (4-A)



SECTION A-A



PANEL JOINT CONNECTION (4-A)
PANELS: B8 & BR8

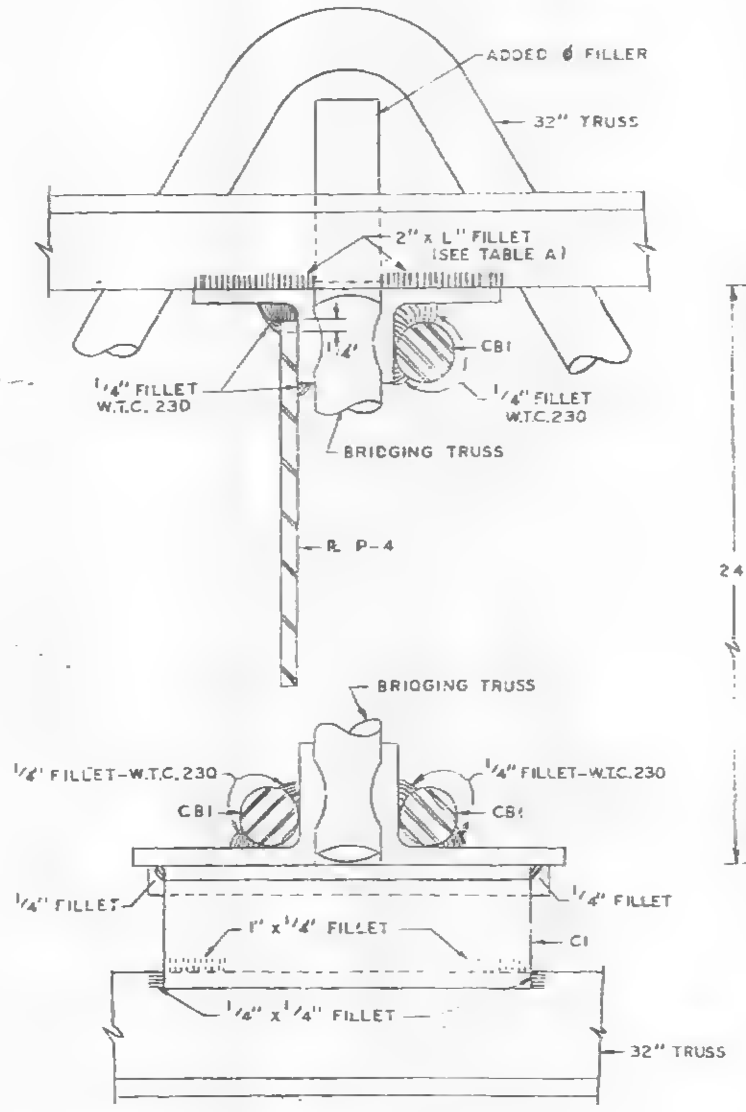
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

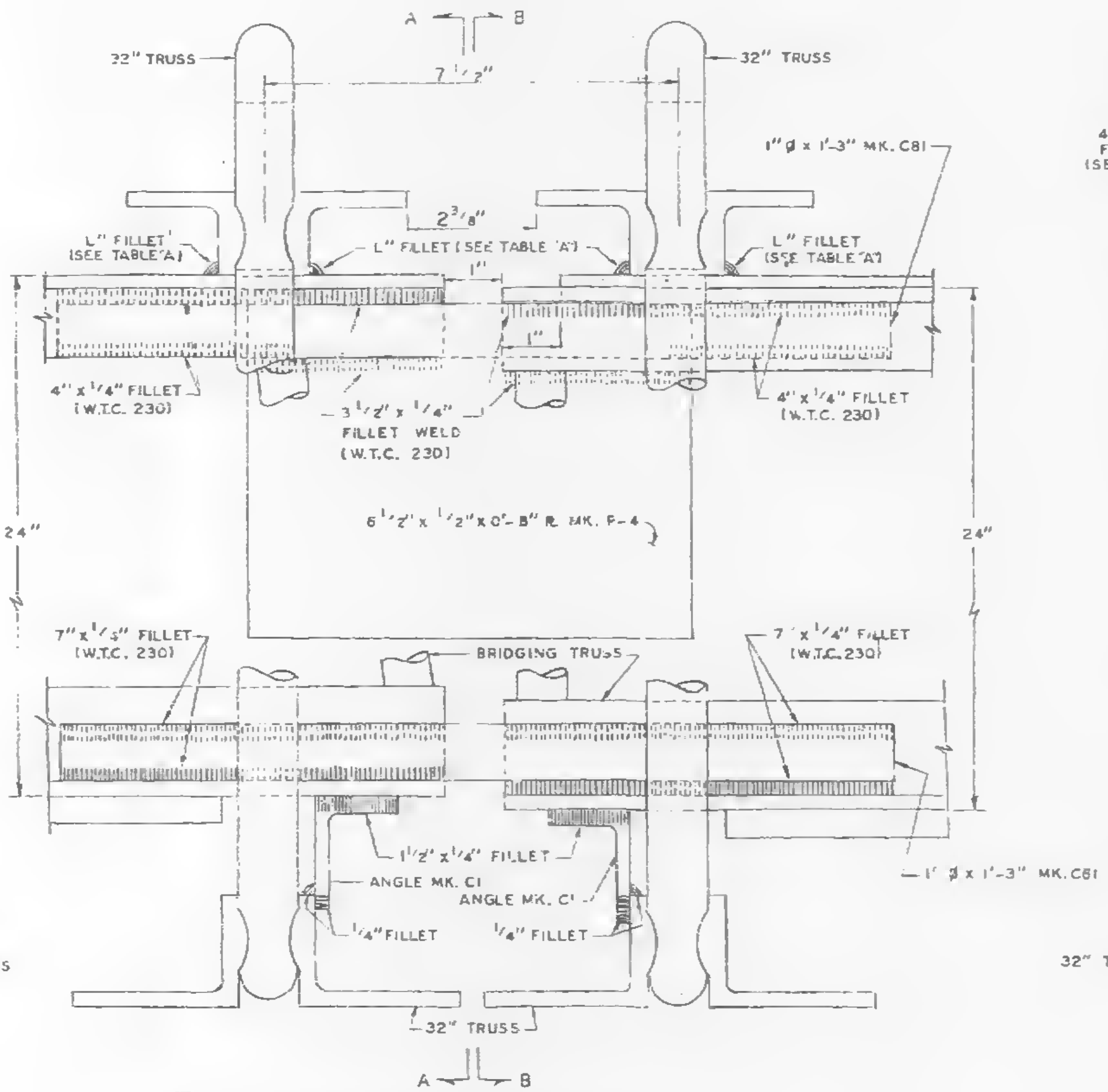
CONNECTION DETAILS 3-A & 4-A

FABRICATION BY LACLEDE STEEL COMPANY

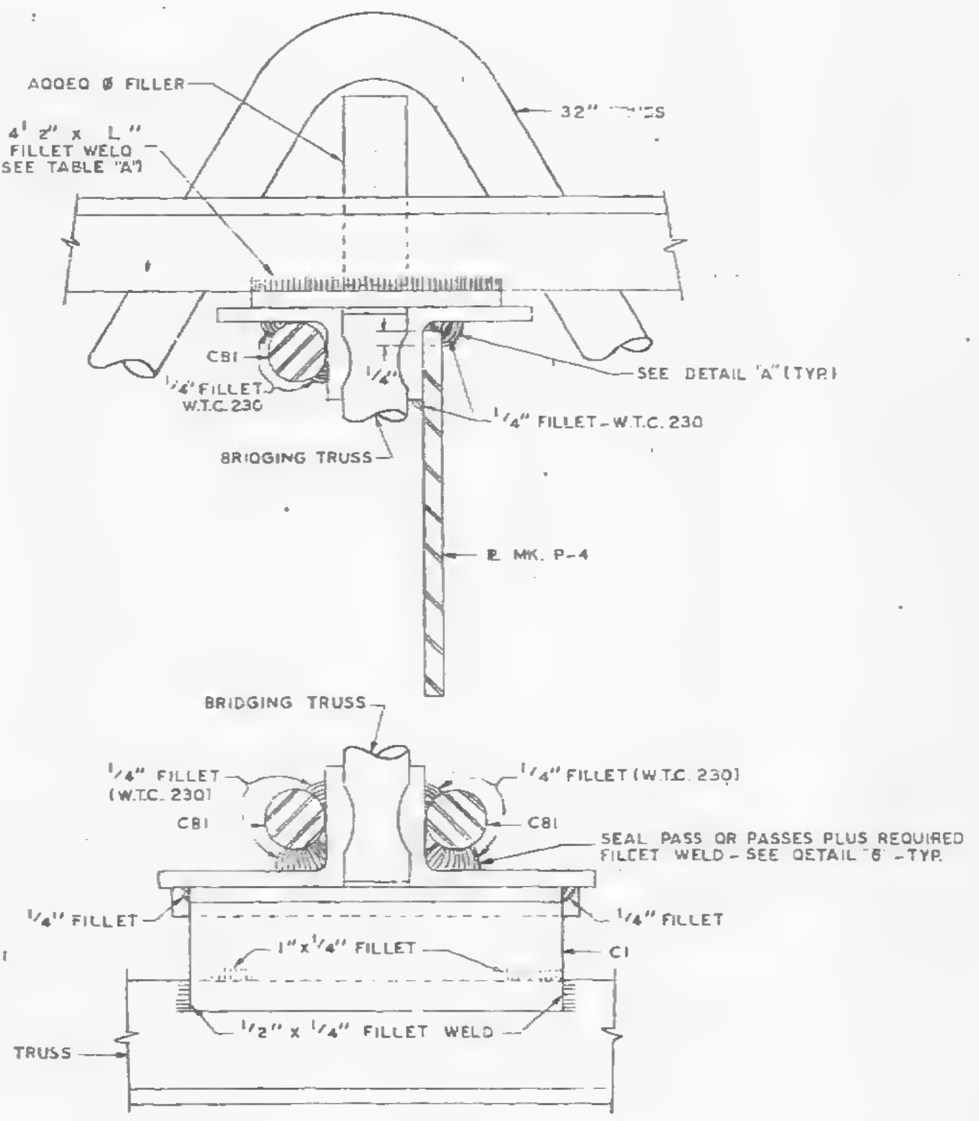
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-62	PLATE
APPROVED FOR FABRICATION BY: James White FOR P.O.N.Y.A.	DATE 4/10/69	DRAWN BY: gdc DATE MARCH 28, 1969	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE MARCH 28, 1969	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A CARL WEBER		FABRICATION CONT. NO. W.T.C 221	SHEET NO. CD 230



SECTION A-A

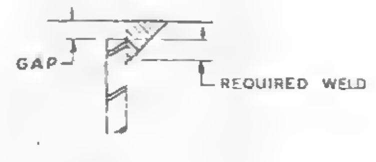

A
B
32" TRUSS
32" TRUSS
7 1/2"
1" ø x 1'-3" MK. C81
2 3/8"
L" FILLET (SEE TABLE 'A')
L" FILLET (SEE TABLE 'A')
L" FILLET (SEE TABLE 'A')
1"
1"
4" x 1/4" FILLET (W.T.C. 230)
3 1/2" x 1/4" FILLET WELD (W.T.C. 230)
4" x 1/4" FILLET (W.T.C. 230)
24"
6 1/2" x 1/2" x 0'-8" ℞ MK. P-4
24"
7" x 1/4" FILLET (W.T.C. 230)
BRIDGING TRUSS
7" x 1/4" FILLET (W.T.C.230)
1 1/2" x 1/4" FILLET
ANGLE MK. C1
ANGLE MK. C1
1" ø x 1'-3" MK. C81
1/4" FILLET
1/4" FILLET
32" TRUSS
A
B

8-A PANEL JOINT CONNECTION DETAIL



SECTION B-B

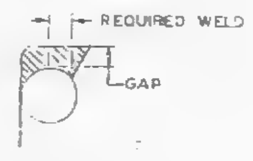
ALL ARC WELD TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL CONNECTION PLATES AND ø SPLICE BARS TO BE ASTM. A36.



DETAIL A

TABLE "A"

"L"	LOCATION
5/16"	ALL FLOOR 44 & 78 EXCEPT CONDITION BELOW.
3/8"	FLR. 44, PANELS DR8 TO ER8 - SOUTH, BLDG. "A"

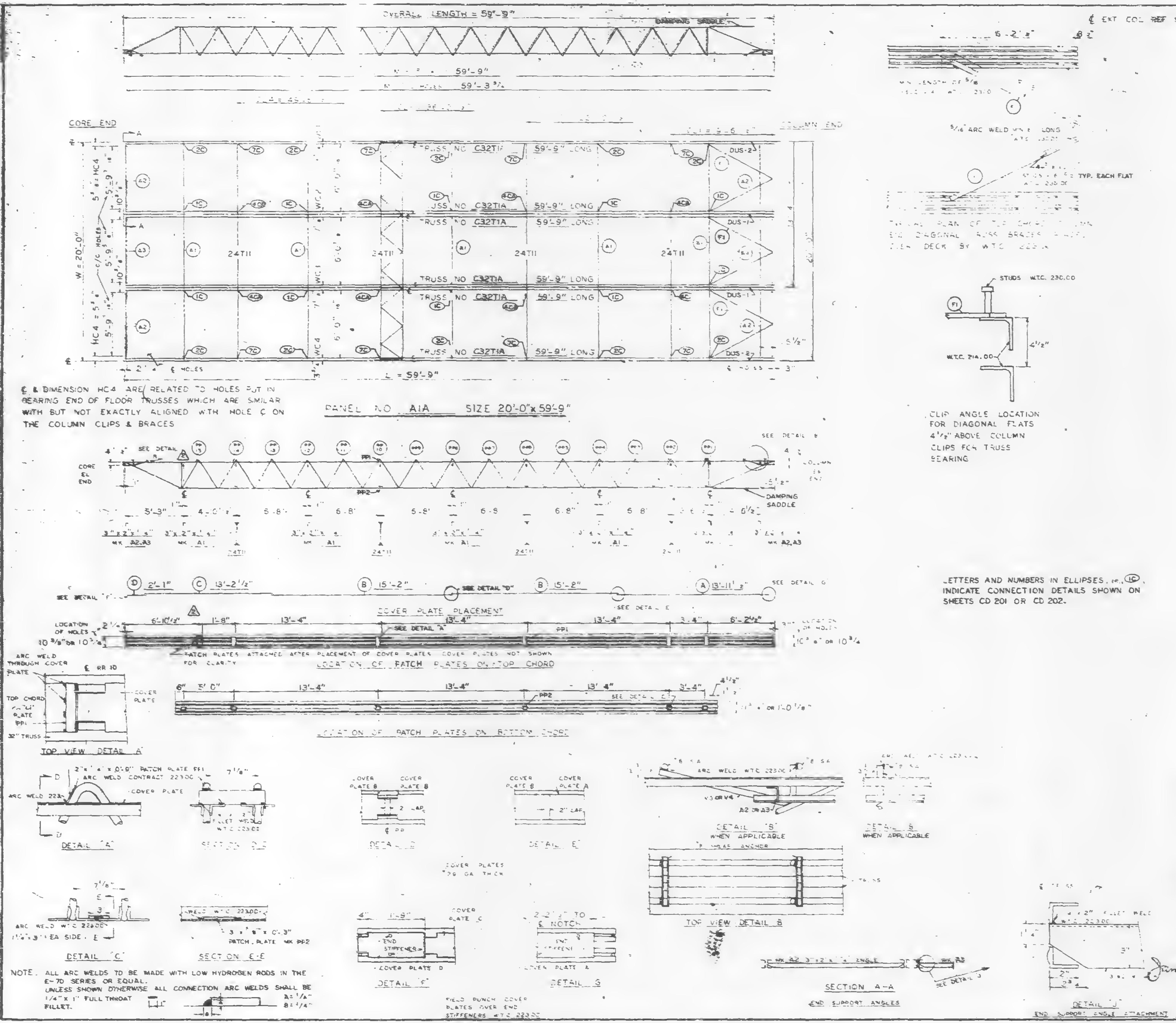


DETAIL "B"

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 8-A
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB4-18
PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A DATE 6/4/69
DRAWN BY: G.D.C. DATE APRIL 22, 1969
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M.CHURA DATE APRIL 22, 1969
IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 231



€ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE € ON THE COLUMN CLIPS & BRACES

LETTERS AND NUMBERS IN ELLIPSES, i.e., ⓘⓒ, INDICATE CONNECTION DETAILS SHOWN ON SHEETS CD 201 OR CD 202.

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FULL THROAT FILLET.
A = 1/4"
B = 1/4"

REQUIRED MATERIAL PER PANEL				REF. DRWG.
MATERIAL	MK	PC'S	SIZE	
FLOOR TRUSSES	T1A	6	C32T1A - 59'-9"	ST201A
BRIDGING TRUSSES	T11	4	24T11 [illegible]	ST2.1
3 x 2 x 1/4 ANGLE	A1	5	3"x2"x1/4"x [illegible]	ST4[illegible]
	A2	4	3"x2"x1/4"x5-11 9/16	ST403
	A3	2	3"x2"x1/4"x5 [illegible] 3/4"	ST403
DIAGONAL FLATS	F1	6	1 1/2"x [illegible]	ST 402
PATCH PLATES	PP1	24	[illegible] x 1/4" x 0'-9"	ST 400
	PP2	24	3" x 3/8" x 0'-[illegible]	ST 400
COVER PLATES	A	-	9"x 0135"x 13'-11 1/2"	ST303
	B	8	9" x .0135" x 15'-2"	ST303
	C	4	9" x 0135" x 13'-2 1/2"	ST303
	D	4	9" x 0135" x 2'-1"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4" x 0'-6"	ST 400
#8 SHEAR ANCHOR	SA2	16	#8 REBAR x 0'-9"	ST 400
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x3/8"x3'-6 7/8"	ST250
	DUS-2	2	3 1/2"x3 1/2"x3/8"x3'-6 7/8"	ST250
CONNECTION BAR	CB1	2	[illegible] x 1'-3"	ST 400
CONNECTION PLATES	P1	10	3 1/2" x 3/8" x 8 1/2"	ST 400
	P2	8	4 1/2" x .30" x 0'-9"	ST 400
	P3	8	4 1/2" x .30" x 1'-0"	ST 400

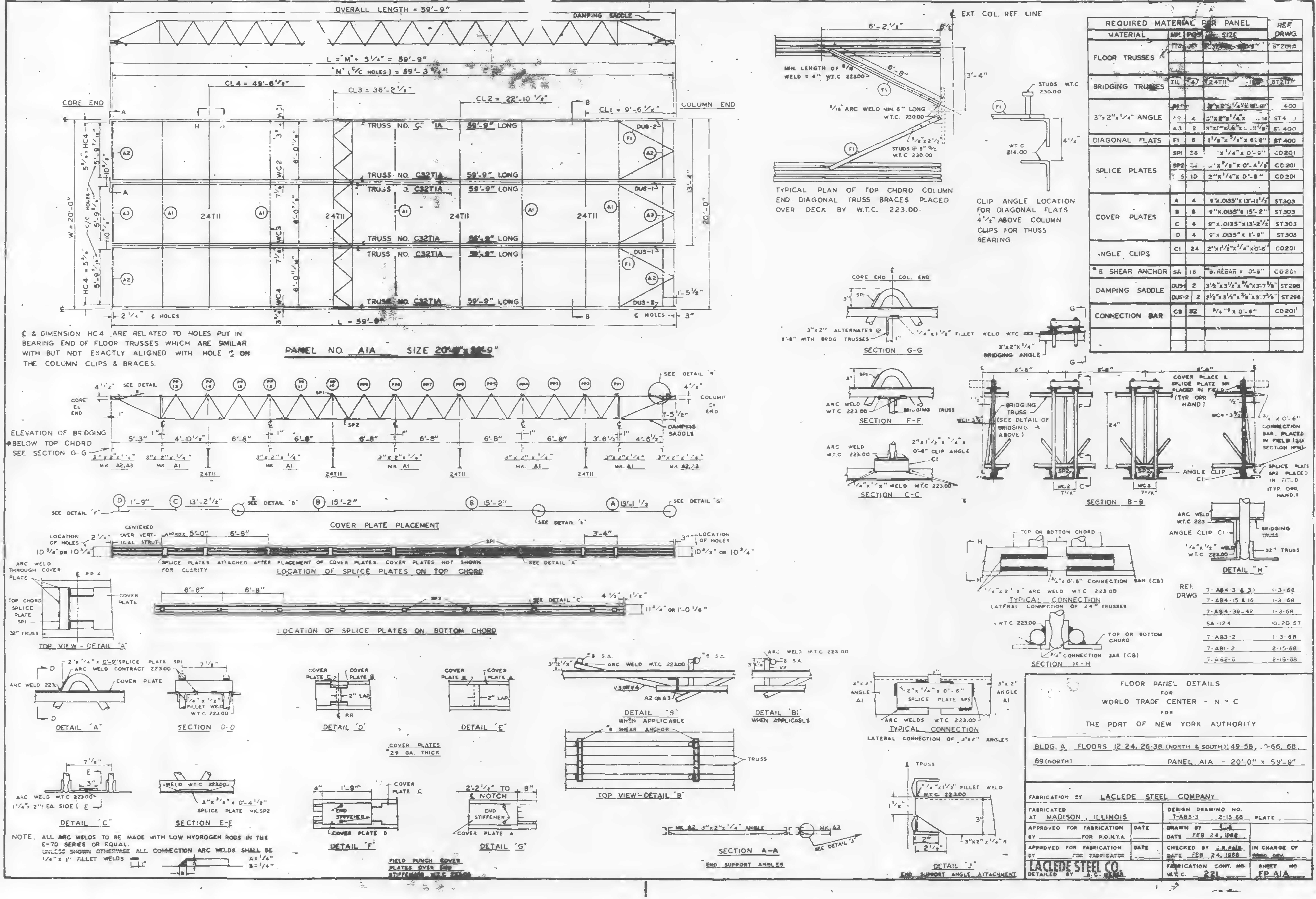
NO.	DATE	REVISION	BY
⚠2	2-17-69	AS NOTED	[illegible]
⚠	7-12-68	GENERAL	[illegible]

REF DRWG
7-AB4-3,3,1 & 3B 1-3-68
7-AB4-15 & 16 9-5-68
7-AB4-41 1-3-68
SA-.24 10-20-67
7-AB3-2 1-3-68
7-AB1-2 2-15-68
7-AB2-6 2-15-68

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG A FLOORS 12-24, 26-38 (NORTH & SOUTH), 49-58, 60-66, 68, 69 (NORTH)
PANEL A1A - 20'-0" x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB3-3 4-1-68 PLATE
APPROVED FOR FABRICATION James White FOR P.O.N.Y.A. DATE 2/[illegible]
DRAWN BY [illegible] DATE FEB 24, 1969
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY J.S.[illegible] DATE FEB 24, [illegible]
LACLEDE [illegible]
DETAILED BY A.T. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. FP A1A


OVERALL LENGTH = 59'-9"
DAMPING SADDLE
L = "M" + 5 1/4" = 59'-9"
"M" (C/C HOLES) = 59'-3"
CL4 = 49'-6 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-10 1/2"
CL1 = 9'-6 1/4"
CORE END
COLUMN END
TRUSS NO. C32T1A 59'-9" LONG
24T11
DUS-1
DUS-2
W = 20'-0"
20'-0"
13'-4"
2 1/4" ℄ HOLES
L = 59'-9"
PANEL NO. A1A SIZE 20'-0" x 59'-9"
SEE DETAIL "B"
COLUMN END
CORE EL END
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
DAMPING SADDLE
COVER PLATE PLACEMENT
LOCATION OF SPLICE PLATES ON TOP CHORD
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
TOP VIEW - DETAIL "A"
DETAIL "A"
SECTION D-D
DETAIL "D"
DETAIL "E"
COVER PLATES 28 GA. THICK
DETAIL "C"
SECTION E-E
DETAIL "F"
DETAIL "G"
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00
DETAIL "B" WHEN APPLICABLE
DETAIL "B1" WHEN APPLICABLE
TOP VIEW - DETAIL "B"
SECTION A-A END SUPPORT ANGLES
DETAIL "J" END SUPPORT ANGLE ATTACHMENT
℄ EXT. COL. REF. LINE
TYPICAL PLAN OF TOP CHORD COLUMN END. DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00.
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.
SECTION G-G
SECTION F-F
SECTION C-C
SECTION B-B
DETAIL "H"
TYPICAL CONNECTION LATERAL CONNECTION OF 24" TRUSSES
SECTION H-H
TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS A = 1/4" B = 1/4"

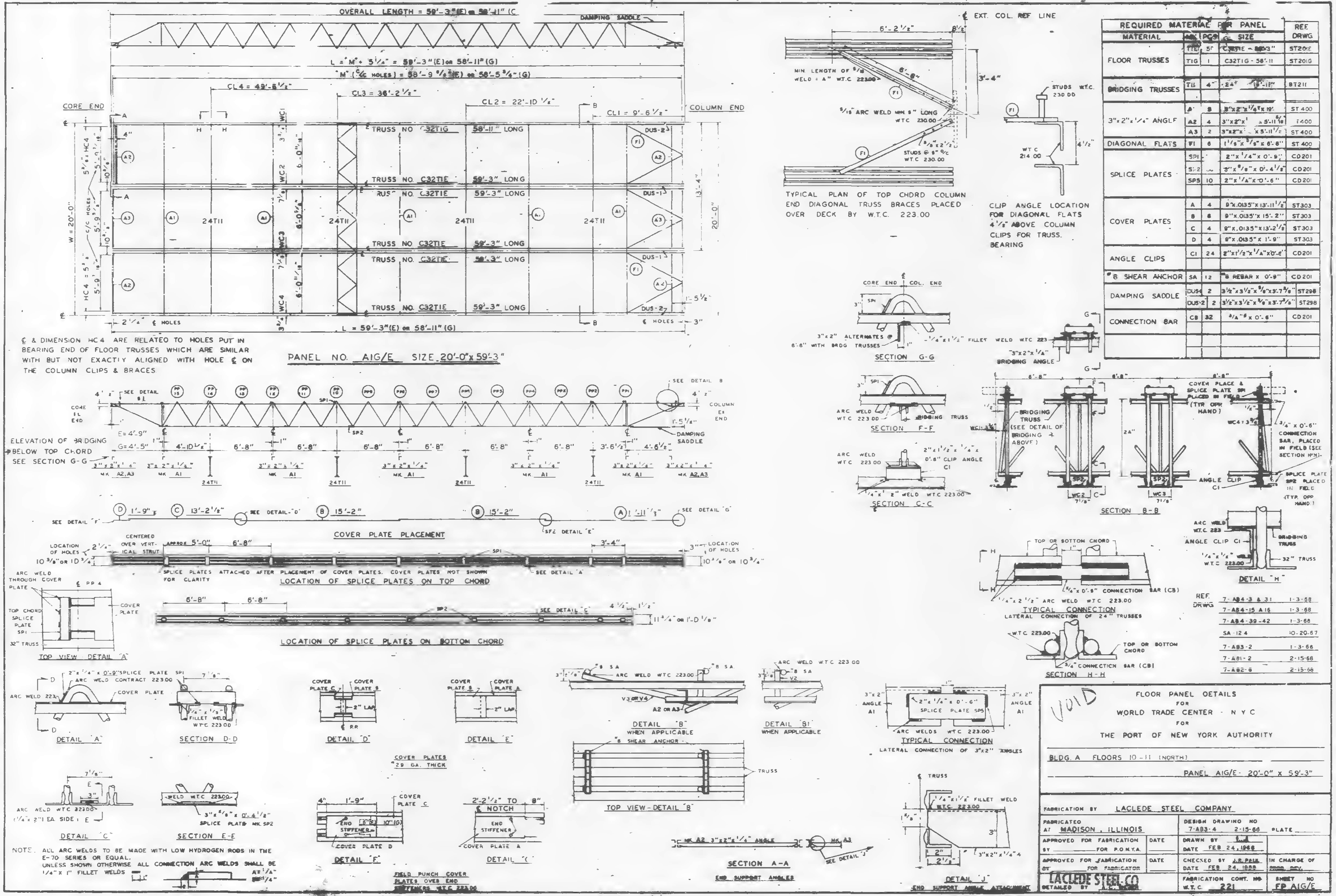
REQUIRED MATERIAL PER PANEL				REF. DRWG
MATERIAL	MK.	PCS.	SIZE	
FLOOR TRUSSES	T1A	[illegible]	C32T1A x 59'-9"	ST201A
BRIDGING TRUSSES	T11	4	24T11 [illegible]	ST211
3"x2"x1/4" ANGLE	A1	[illegible]	3"x2"x1/4"x 12'-11"	400
	A2	4	3"x2"x1/4"x [illegible]	ST4 [illegible]
	A3	2	3"x2"x1/4"x [illegible]-11 1/8"	ST 400
DIAGONAL FLATS	F1	6	1 1/8"x 5/8"x 6'-8"	ST 400
SPLICE PLATES	SP1	36	[illegible]x 1/4"x 0'-9"	CD201
	SP2	[illegible]	[illegible]"x 3/8"x 0'-4 1/2"	CD201
	SP5	10	2"x 1/4"x 0'-8"	CD201
COVER PLATES	A	4	9"x.0135"x 13'-11 1/2"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2 1/2"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4"x 0'-6"	CD201
#8 SHEAR ANCHOR	SA	16	#8 REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 3/8"x3'-7 3/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 3/8"x3'-7 3/8"	ST298
CONNECTION BAR	CB	32	3/4"⌀ x 0'-6"	CD201

REF DRWG	
7-AB4-3 & 31	1-3-68
7-AB4-15 & 16	1-3-68
7-AB4-39-42	1-3-68
SA-124	10-20-67
7-AB3-2	1-3-68
7-AB1-2	2-15-68
7-AB2-6	2-15-68

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 12-24, 26-38 (NORTH & SOUTH); 49-58, 60-66, 68, 69 (NORTH)
PANEL A1A - 20'-0" x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB3-3 2-15-68 PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A. DATE ______
DRAWN BY ______ DATE FEB 24, 1968
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE ______
CHECKED BY J.R. PAUL DATE FEB 24, 1968
IN CHARGE OF [illegible]
LACLEDE STEEL CO.
DETAILED BY A.C. [illegible]
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. FP A1A


OVERALL LENGTH = 59'-3"(E) OR 58'-11" (G)
DAMPING SADDLE
L = "M" + 5 1/4" = 59'-3"(E) OR 58'-11" (G)
"M" (C/C HOLES) = 58'-9 5/8"(E) OR 58'-5 5/8" (G)
CORE END
COLUMN END
CL4 = 49'-5 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-10 1/4"
CL1 = 9'-6 1/2"
TRUSS NO. C32T1G 58'-11" LONG
TRUSS NO. C32T1E 59'-3" LONG
24T11
W = 20'-0"
L = 59'-3"(E) OR 58'-11" (G)
PANEL NO. A1G/E SIZE 20'-0" x 59'-3"
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
COVER PLATE PLACEMENT
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY
LOCATION OF SPLICE PLATES ON TOP CHORD
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
TOP VIEW DETAIL "A"
DETAIL "A"
SECTION D-D
DETAIL "D"
DETAIL "E"
DETAIL "C"
SECTION E-E
DETAIL "F"
DETAIL "G"
COVER PLATES 29 GA. THICK
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00
DETAIL "B" WHEN APPLICABLE
DETAIL "B1" WHEN APPLICABLE
TOP VIEW - DETAIL "B"
SECTION A-A END SUPPORT ANGLES
TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES
DETAIL "J" END SUPPORT ANGLE ATTACHMENT
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING
SECTION G-G
SECTION F-F
SECTION C-C
SECTION B-B
DETAIL "H"
TYPICAL CONNECTION LATERAL CONNECTION OF 24" TRUSSES
SECTION H-H

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS

REQUIRED MATERIAL PER PANEL

MATERIAL	MK	PCS	SIZE	REF DRWG
FLOOR TRUSSES	T1E	5	C32T1E - 59'-3"	ST201E
	T1G	1	C32T1G - 58'-11	ST201G
BRIDGING TRUSSES	T11	4	24T11 - 19'-11"	BT211
3"x2"x1/4" ANGLE	A1	8	3"x2"x1/4"x 19'	ST 400
	A2	4	3"x2"x1/4" x 5'-11 5/8	ST400
	A3	2	3"x2"x1/4" x 5'-11 1/2	ST 400
DIAGONAL FLATS	F1	6	1 1/8"x 5/8" x 6'-8"	ST 400
SPLICE PLATES	SP1	[illegible]	2"x 1/4"x 0'-9"	CD201
	SP2	[illegible]	3"x 5/8"x 0'-4 1/2"	CD201
	SP5	10	2"x 1/4"x 0'-6"	CD201
COVER PLATES	A	4	9"x.0135"x 13'-11 1/2"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2 1/2"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4"x0'-6"	CD201
#6 SHEAR ANCHOR	SA	12	#6 REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 5/8"x3'-7 3/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 5/8"x3'-7 3/8"	ST298
CONNECTION BAR	CB	32	3/4"# x 0'-6"	CD201

REF. DRWG.

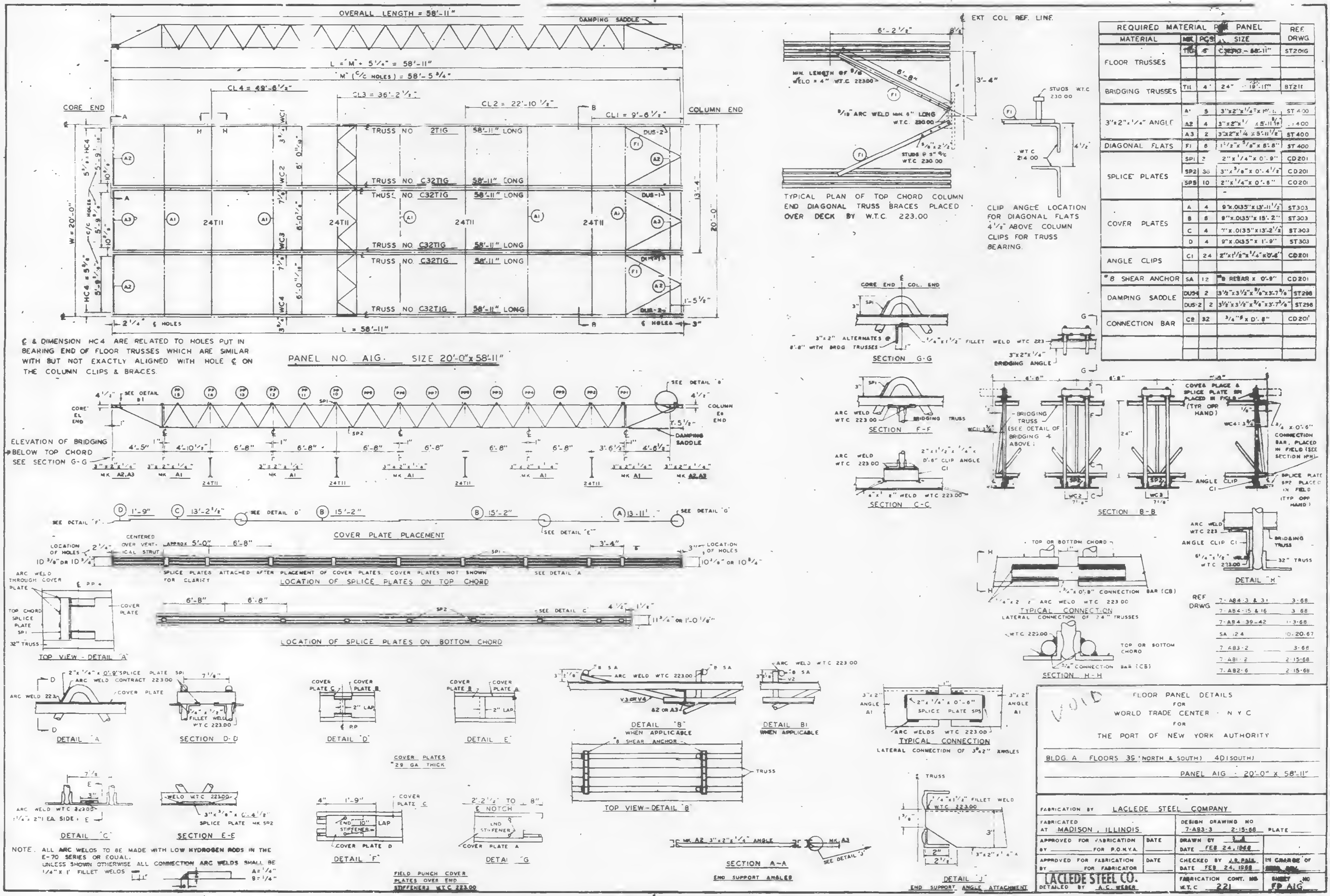
7-AB4-3 & 31	1-3-68
7-AB4-15 A16	1-3-68
7-AB4-39-42	1-3-68
SA-124	10-20-67
7-AB3-2	1-3-68
7-AB1-2	2-15-68
7-AB2-6	2-15-68

VOID

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 10-11 (NORTH)
PANEL A1G/E - 20'-0" x 59'-3"

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB3-4 2-15-68 PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE
DRAWN BY
DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY J.R. PAUL
DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO
DETAILED BY A.C. [illegible]
FABRICATION CONT. NO W.T.C. 221
SHEET NO FP A1G/E


OVERALL LENGTH = 58'-11"
DAMPING SADDLE
L = "M" + 5 1/4" = 58'-11"
"M" (C/C HOLES) = 58'-5 3/4"
CL4 = 48'-6 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-10 1/2"
CL1 = 9'-6 1/2"
CORE END
COLUMN END
TRUSS NO 2T1G 58'-11" LONG
TRUSS NO C32T1G 58'-11" LONG
24T11
W = 20'-0"
L = 58'-11"
PANEL NO. A1G SIZE 20'-0" x 58'-11"
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
COVER PLATE PLACEMENT
LOCATION OF SPLICE PLATES ON TOP CHORD
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
TOP VIEW - DETAIL "A"
DETAIL "A"
SECTION D-D
DETAIL "D"
DETAIL "E"
COVER PLATES 29 GA THICK
DETAIL "B" WHEN APPLICABLE
DETAIL B1 WHEN APPLICABLE
TOP VIEW - DETAIL "B"
TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES
DETAIL "C"
SECTION E-E
DETAIL "F"
DETAIL "G"
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C 223.00
SECTION A-A END SUPPORT ANGLES
DETAIL "J" END SUPPORT ANGLE ATTACHMENT
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.
EXT COL REF LINE
SECTION G-G
SECTION F-F
SECTION C-C
SECTION B-B
DETAIL "H"
TYPICAL CONNECTION LATERAL CONNECTION OF 24" TRUSSES
SECTION H-H

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1' FILLET WELDS
A = 1/4"
B = 1/4"

REQUIRED MATERIAL PER PANEL				REF. DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	T1G	6	C32T1G - 58'-11"	ST201G
BRIDGING TRUSSES	T11	4	24" - 19'-11"	BT211
3"x2"x1/4" ANGLE	A1	5	3"x2"x1/4"x 19'-1	ST 400
	A2	4	3"x2"x1/4" x 5'-11 3/8"	ST 400
	A3	2	3"x2"x1/4 x 5'-11 1/2"	ST 400
DIAGONAL FLATS	F1	6	1 1/2"x 5/8"x 8'-8"	ST 400
SPLICE PLATES	SP1	2	2"x 1/4"x 0'-9"	CD201
	SP2	36	3"x 3/8"x 0'-4 1/2"	CD201
	SP3	10	2"x 1/4"x 0'-8"	CD201
			-	
COVER PLATES	A	4	9"x.0135"x 13'-11 1/2"	ST303
	B	6	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2 1/2"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4"x 0'-6"	CD201
#8 SHEAR ANCHOR	SA	12	#8 REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 3/8"x3'-7 3/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 3/8"x3'-7 3/8"	ST298
CONNECTION BAR	CB	32	3/4"Φ x 0'-8"	CD201

REF DRWG	
7-AB4-3 & 31	3-68
7-AB4-15 & 16	3-68
7-AB4-39-42	1-3-68
SA 124	10-20.67
7-AB3-2	3-68
7-AB1-2	2-15-68
7-AB2-6	2-15-68

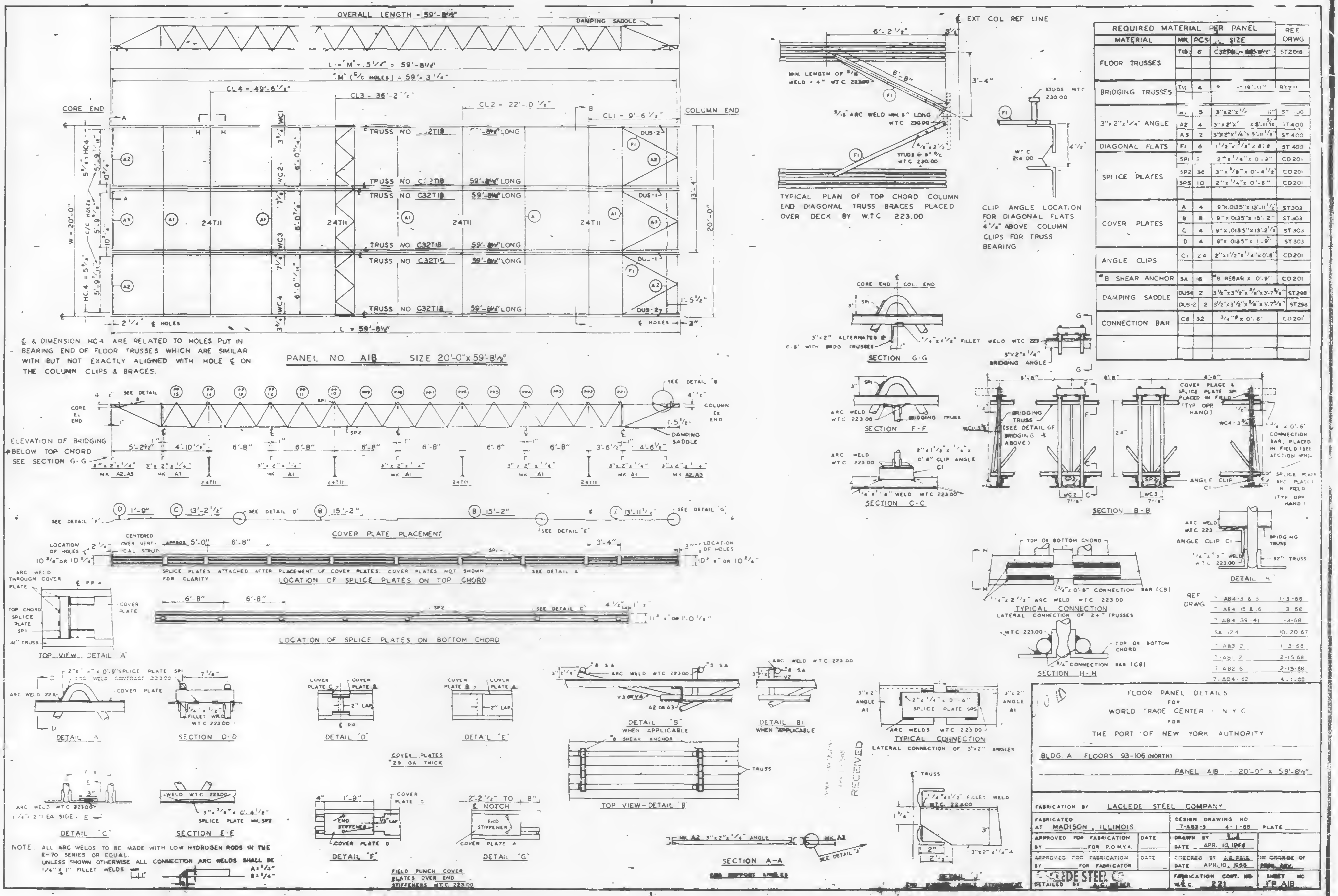
VOID

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 39 (NORTH & SOUTH) 40 (SOUTH)
PANEL A1G - 20'-0" x 58'-11"

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 2-15-68 PLATE	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY ______ DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY J.R. PALE DATE FEB 24, 1968	IN CHARGE OF [illegible]
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C 221	SHEET NO FP A1G


OVERALL LENGTH = 59'-8¼"
DAMPING SADDLE
L = "M" - .5¼" = 59'-8½"
"M" (C/C HOLES) = 59'-3¼"
CL4 = 49'-6⅛"
CL3 = 36'-2½"
CL2 = 22'-10½"
CL1 = 9'-6½"
CORE END
COLUMN END
TRUSS NO C32T1B 59'-8¼" LONG
DUS-1
DUS-2
24T11
W = 20'-0"
HC4 = 5⅝"
L = 59'-8½"
℄ HOLES
PANEL NO A1B SIZE 20'-0" x 59'-8½"
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
SEE DETAIL B
COLUMN EX END
CORE EL END
COVER PLATE PLACEMENT
SEE DETAIL F
SEE DETAIL D
SEE DETAIL E
SEE DETAIL G
LOCATION OF HOLES
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY
SEE DETAIL A
LOCATION OF SPLICE PLATES ON TOP CHORD
SEE DETAIL C
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
TOP VIEW DETAIL A
DETAIL A
SECTION D-D
DETAIL D
DETAIL E
COVER PLATES 29 GA THICK
DETAIL B
WHEN APPLICABLE
DETAIL B1
WHEN APPLICABLE
TOP VIEW - DETAIL B
DETAIL C
SECTION E-E
DETAIL F
DETAIL G
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00
SECTION A-A
END SUPPORT ANGLES
DETAIL J
END SUPPORT ANGLE ATTACHMENT
EXT COL REF LINE
MIN. LENGTH OF 5/16 WELD = 4" W.T.C. 223.00
5/16 ARC WELD MIN. 3" LONG W.T.C. 230.00
STUDS @ 8" C/C W.T.C. 230.00
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00
STUDS W.T.C. 230.00
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4⅛" ABOVE COLUMN CLIPS FOR TRUSS BEARING
SECTION G-G
SECTION F-F
SECTION C-C
SECTION B-B
DETAIL H
TYPICAL CONNECTION
LATERAL CONNECTION OF 24" TRUSSES
SECTION H-H
TYPICAL CONNECTION
LATERAL CONNECTION OF 3"x2" ANGLES
RECEIVED

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS
A = 1/4"
B = 1/4"

REQUIRED MATERIAL PER PANEL

MATERIAL	MK.	PCS	SIZE	REF. DRWG
FLOOR TRUSSES	T1B	6	C32T1B - 59'-8½"	ST2018
BRIDGING TRUSSES	T11	4	2 - 19'-11"	ST211
3"x2"x1/4" ANGLE	A1	5	3"x2"x1/4"	ST400
	A2	4	3"x2"x1/4" x 5'-11 5/16"	ST400
	A3	2	3"x2"x1/4"x 5'-11½"	ST400
DIAGONAL FLATS	F1	6	1½"x5/8"x 6'-8	ST400
SPLICE PLATES	SP1	3	2"x1/4"x 0'-9"	CD201
	SP2	36	3"x3/8"x 0'-4½"	CD201
	SP5	10	2"x1/4"x 0'-8"	CD201
COVER PLATES	A	4	9"x.0135"x 13'-11½"	ST303
	B	8	9"x .0135"x 15'-2"	ST303
	C	4	9"x .0135"x 13'-2½"	ST303
	D	4	9"x .0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1½"x1/4"x0'-6"	CD201
#8 SHEAR ANCHOR	SA	16	#8 REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3½"x3½"x3/8"x3'-7⅜"	ST298
	DUS-2	2	3½"x3½"x3/8"x3'-7⅜"	ST298
CONNECTION BAR	CB	32	3/4"φ x 0'-6"	CD201

REF DRWG	
7 AB4 3 & 3	1-3-68
7 AB4 15 & 16	3 68
7 AB4 39-41	-3-68
SA 124	10-20-67
7 AB3 2	1 3-68
7-AB1 2	2-15 68
7 AB2 6	2-15-68
7-AB4-42	4-1-68

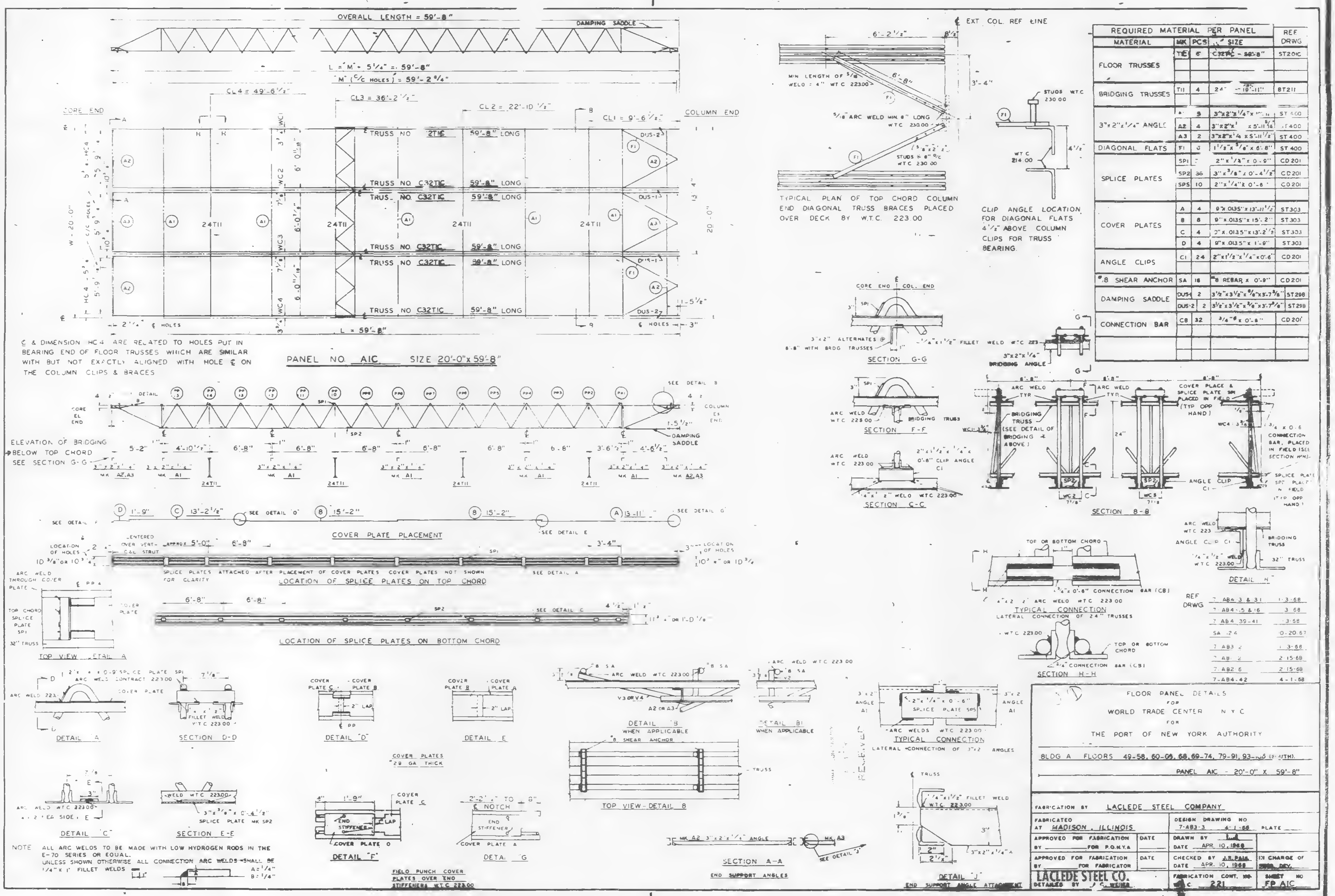
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER · N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 93-106 (NORTH)

PANEL A1B · 20'-0" x 59'-8½"

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 4-1-68 PLATE	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY ______ DATE APR. 10, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY J.C. PAUL DATE APR. 10, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. [illegible]		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. FP A1B


OVERALL LENGTH = 59'-8"
DAMPING SADDLE
L = "M" + 5 1/4" = 59'-8"
"M" (C/C HOLES) = 59'-2 3/4"
CL4 = 49'-6 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-10 1/2"
CL1 = 9'-6 1/2"
CORE END
COLUMN END
TRUSS NO 2T1C 59'-8" LONG
TRUSS NO C32T1C 59'-8" LONG
TRUSS NO C32T1C 59'-8" LONG
TRUSS NO C32T1C 59'-8" LONG
TRUSS NO C32T1C 59'-8" LONG
TRUSS NO C32T1C 59'-8" LONG
24T11
WC1
WC2
WC3
WC4
HC4
DUS-2
DUS-1
20'-0"
L = 59'-8"
PANEL NO. AIC SIZE 20'-0" x 59'-8"
EXT COL REF LINE
6'-2 1/2"
6'-8"
3'-4"
MIN LENGTH OF 5/16" WELD = 4" WTC 223.00
5/16" ARC WELD MIN 8" LONG WTC 230.00
STUDS @ 8" C/C WTC 230.00
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00
STUDS WTC 230.00
WTC 214.00
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
CORE EL END
COLUMN EL END
DAMPING SADDLE
SEE DETAIL B
COVER PLATE PLACEMENT
LOCATION OF SPLICE PLATES ON TOP CHORD
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES COVER PLATES NOT SHOWN FOR CLARITY
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
TOP VIEW DETAIL A
SECTION G-G
SECTION F-F
SECTION C-C
SECTION B-B
DETAIL H
TYPICAL CONNECTION LATERAL CONNECTION OF 24" TRUSSES
3/4" x 0'-8" CONNECTION BAR (CB)
SECTION H-H
DETAIL A
SECTION D-D
DETAIL D
DETAIL E
COVER PLATES 28 GA THICK
DETAIL B WHEN APPLICABLE
DETAIL B1 WHEN APPLICABLE
TOP VIEW - DETAIL B
TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES
2"x1/4"x0'-8" SPLICE PLATE SPS
DETAIL C
SECTION E-E
3"x3/8"x0'-4 1/2" SPLICE PLATE MK SP2
DETAIL F
DETAIL G
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00
SECTION A-A END SUPPORT ANGLES
MK A2 3"x2"x1/4" ANGLE
MK A3
DETAIL J END SUPPORT ANGLE ATTACHMENT
1/4"x1 1/2" FILLET WELD WTC 223.00
A = 1/4"
B = 1/4"

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

REQUIRED MATERIAL PER PANEL				REF DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	T1C	6	C32T1C - 59'-8"	ST201C
BRIDGING TRUSSES	T11	4	24" [illegible] - 19'-11"	ST211
3"x2"x1/4" ANGLE	A1	9	3"x2"x1/4"x [illegible]	ST400
	A2	4	3"x2"x1/4" x 5'-11 5/16"	ST400
	A3	2	3"x2"x1/4" x 5'-11 1/2"	ST400
DIAGONAL FLATS	F1	3	1 1/2"x 5/8"x 6'-8"	ST400
SPLICE PLATES	SP1	[illegible]	2"x1/4"x 0'-9"	CD201
	SP2	36	3"x3/8"x 0'-4 1/2"	CD201
	SPS	10	2"x1/4"x 0'-8"	CD201
COVER PLATES	A	4	9"x.0135"x 13'-11 1/2"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2 1/2"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x1/4"x 0'-6"	CD201
#8 SHEAR ANCHOR	SA	16	#8 REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 5/8"x 3'-7 3/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 3/8"x 3'-7 3/8"	ST298
CONNECTION BAR	CB	32	3/4"φ x 0'-8"	CD201

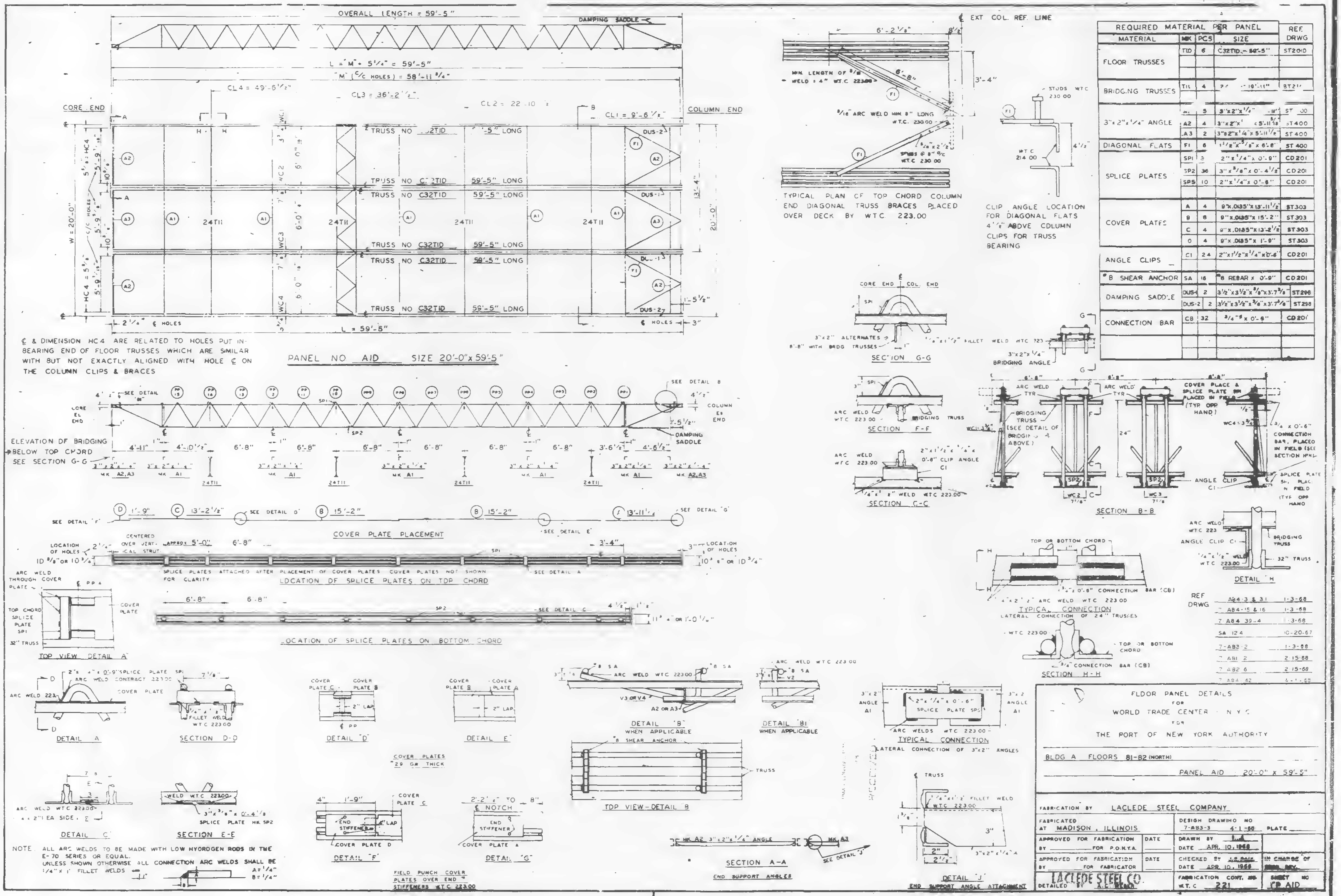
REF DRWG	
7-AB4-3 & 31	1-3-68
7-AB4-15 & 16	3-68
7-AB4-39-41	3-68
SA-24	10-20-67
7-AB3-2	1-3-68
7-AB1-2	2-15-68
7-AB2-6	2-15-68
7-AB4-42	4-1-68

NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG A FLOORS 49-58, 60-66, 68, 69-74, 79-91, 93-106 (SOUTH).
PANEL AIC - 20'-0" X 59'-8"

FABRICATION BY LACLEDE STEEL COMPANY	
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO 7-AB3-3 4-1-68 PLATE ____
APPROVED FOR FABRICATION BY ________ FOR P.O.N.Y.A. DATE ____	DRAWN BY [illegible] DATE APR. 10, 1968
APPROVED FOR FABRICATION BY ________ FOR FABRICATOR DATE ____	CHECKED BY J.R. PAUL DATE APR. 10, 1968 — IN CHARGE OF [illegible] DEV.
LACLEDE STEEL CO. DETAILED BY J. C. WEBER	FABRICATION CONT. NO. [illegible]C 221 — SHEET NO FP AIC


OVERALL LENGTH = 59'-5"
DAMPING SADDLE
L = "M" + 5 1/4" = 59'-5"
"M" (C/C HOLES) = 58'-11 3/4"
CL4 = 49'-6 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-10 1/2"
CL1 = 9'-6 1/2"
CORE END
COLUMN END
TRUSS NO C32TID 59'-5" LONG
24T11
DUS-1
DUS-2
W = 20'-0"
HC4
WC1
WC2
WC3
WC4
2 1/4" ℄ HOLES
L = 59'-8"
℄ HOLES
3"
1'-5 1/2"
13'-4"
20'-0"
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
COLUMN EL END
CORE EL END
SEE DETAIL "B"
4'-11"
4'-10 1/2"
6'-8"
3'-6 1/2"
4'-6 1/2"
3"x2"x1/4" MK A2,A3
3"x2"x1/4" MK A1
SP1
SP2
COVER PLATE PLACEMENT
D 1'-9"
C 13'-2 1/2"
B 15'-2"
B 15'-2"
C 13'-11 1/2"
SEE DETAIL "F"
SEE DETAIL "D"
SEE DETAIL "E"
SEE DETAIL "G"
LOCATION OF HOLES 10 3/8" OR 10 3/4"
CENTERED OVER VERTICAL STRUT
APPROX 5'-0"
3'-4"
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES COVER PLATES NOT SHOWN FOR CLARITY
SEE DETAIL A
LOCATION OF SPLICE PLATES ON TOP CHORD
SEE DETAIL C
11 3/4" OR 1'-0 1/4"
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
ARC WELD THROUGH COVER PLATE
TOP CHORD SPLICE PLATE SP1
32" TRUSS
COVER PLATE
TOP VIEW DETAIL "A"
2"x1/4"x0'-9" SPLICE PLATE SP1
ARC WELD CONTRACT 223.00
DETAIL A
SECTION D-D
FILLET WELD WTC 223.00
DETAIL "D"
DETAIL "E"
COVER PLATES "29 GA THICK
ARC WELD WTC 223.00
DETAIL "C"
SECTION E-E
WELD WTC 223.00
3"x3/8"x0'-4 1/8 SPLICE PLATE MK SP2
DETAIL "F"
END STIFFENER
COVER PLATE D
DETAIL "G"
℄ NOTCH
FIELD PUNCH COVER PLATES OVER END STIFFENERS WTC 223.00
DETAIL "B" WHEN APPLICABLE
#8 SA
V3 OR V4
A2 OR A3
DETAIL "B1" WHEN APPLICABLE
TOP VIEW-DETAIL B
#8 SHEAR ANCHOR
TRUSS
SECTION A-A
END SUPPORT ANGLES
MK A2 3"x2"x1/4" ANGLE
MK A3
SEE DETAIL "J"
DETAIL "J"
END SUPPORT ANGLE ATTACHMENT
TYPICAL CONNECTION
LATERAL CONNECTION OF 3"x2" ANGLES
2"x1/4"x0'-6" SPLICE PLATE SP5
ARC WELDS WTC 223.00
EXT COL REF LINE
6'-2 1/2"
3'-4"
MIN LENGTH OF 5/16" WELD = 4" WTC 223.00
5/16" ARC WELD MIN 8" LONG WTC 223.00
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY WTC 223.00
STUDS WTC 230.00
WTC 214.00
4 1/2"
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING
CORE END
COL END
SECTION G-G
3"x2" ALTERNATES 6'-8" WITH BRDG TRUSSES
3"x2"x1/4" BRIDGING ANGLE
SECTION F-F
BRIDGING TRUSS
SECTION C-C
2"x1 1/2"x1/4"x0'-6" CLIP ANGLE C1
SECTION B-B
ARC WELD TYP
BRIDGING TRUSS (SEE DETAIL OF BRIDGING ABOVE)
24"
COVER PLATE & SPLICE PLATE PLACED IN FIELD (TYP OPP HAND)
3/4"x0'-6" CONNECTION BAR, PLACED IN FIELD (SEE SECTION H-H)
ANGLE CLIP C1
SPLICE PLATE SP PLACED IN FIELD (TYP OPP HAND)
DETAIL "H"
ANGLE CLIP C1
BRIDGING TRUSS
1/4"x1/2" WELD WTC 223.00
32" TRUSS
TOP OR BOTTOM CHORD
3/4"x0'-6" CONNECTION BAR (CB)
TYPICAL CONNECTION
LATERAL CONNECTION OF 24" TRUSSES
SECTION H-H
TOP OR BOTTOM CHORD
3/4" CONNECTION BAR (CB)

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

PANEL NO AID SIZE 20'-0" x 59'-5"

REQUIRED MATERIAL PER PANEL				REF DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	TID	6	C32TID - 59'-5"	ST2010
BRIDGING TRUSSES	T11	4	24 [illegible] 19'-11"	ST21[illegible]
3"x2"x1/4" ANGLE	A1	5	3"x2"x1/4" [illegible] 11"	ST [illegible]00
	A2	4	3"x2"x1/4" x 5'-11 5/16"	ST400
	A3	2	3"x2"x1/4" x 5'-11 1/2"	ST400
DIAGONAL FLATS	F1	6	1 1/2"x5/8"x 6'-8"	ST400
SPLICE PLATES	SP1	3	2"x1/4"x 0'-9"	CD201
	SP2	36	3"x3/8"x 0'-4 1/2"	CD201
	SP5	10	2"x1/4"x 0'-6"	CD201
COVER PLATES	A	4	9"x.0135"x 13'-11 1/2"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2 1/2"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x1/4"x0'-6"	CD201
#8 SHEAR ANCHOR	SA	16	#8 REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x3/8"x3'-7 3/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x3/8"x3'-7 3/8"	ST298
CONNECTION BAR	CB	32	3/4"ϕ x 0'-6"	CD201

REF DRWG

A84-3 & 3.1	1-3-68
7 A84-15 & 16	1-3-68
7-A84 39-4	1-3-68
SA 12 4	10-20-67
7-A83-2	1-3-68
7 A81 2	2-15-68
7 A82 6	2-15-68
7 A84-42	4-1-68

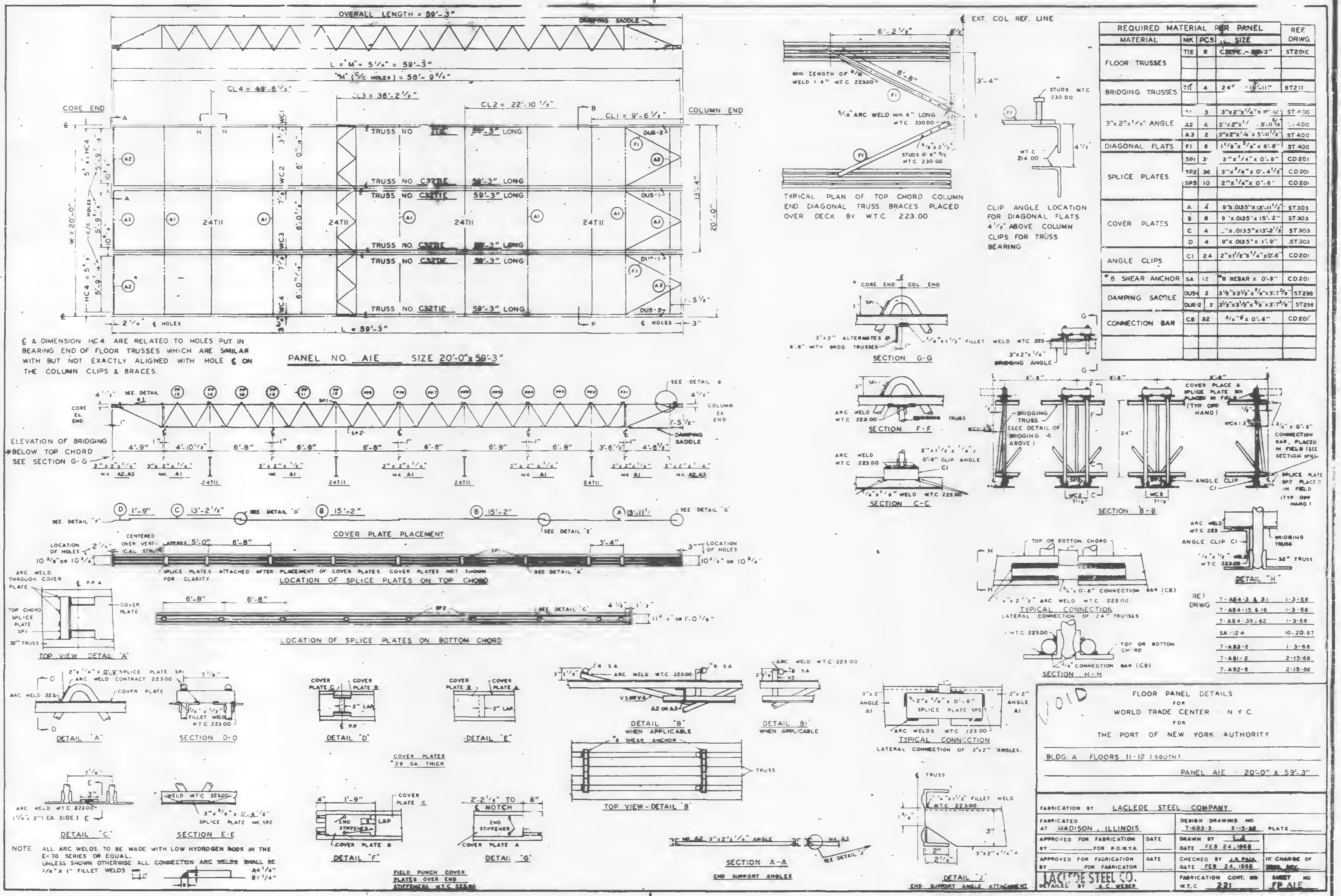
NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS
A = 1/4"
B = 1/4"

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG A FLOORS 81-82 (NORTH)
PANEL AID 20'-0" x 59'-5"

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-A83-3 4-1-68	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY [illegible] DATE APR. 10, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY [illegible] DATE APR. 10, 1968	IN CHARGE OF [illegible]
LACLEDE STEEL CO. DETAILED BY A.C. [illegible]		FABRICATION CONT. NO. W.T.C 221	SHEET NO FP AID


OVERALL LENGTH = 59'-3"
DAMPING SADDLE
L = "M" + 5¼" = 59'-3"
"M" (C/C HOLES) = 58'-9¾"
CL4 = 49'-6½"
CL3 = 36'-2½"
CL2 = 22'-10½"
CL1 = 9'-6½"
CORE END
COLUMN END
TRUSS NO. C32TIE 59'-3" LONG
24TII
W = 20'-0"
20'-0"
13'-4"
WC1
WC2
WC3
WC4
HC4
C/C HOLES
DUS-1
DUS-2
A1
A2
A3
F1
2¼" ℄ HOLES
L = 59'-3"
℄ HOLES
PANEL NO. AIE SIZE 20'-0" x 59'-3"
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G
SEE DETAIL B
CORE EL END
COLUMN EL END
DAMPING SADDLE
4'-9"
4'-10½"
6'-8"
3'-6½"
4'-6½"
3"x2"x¼" MK A2, A3
3"x2"x¼" MK A1
COVER PLATE PLACEMENT
D 1'-9"
C 13'-2½"
B 15'-2"
A 13'-11½"
SEE DETAIL "D"
SEE DETAIL "E"
SEE DETAIL "F"
SEE DETAIL "G"
LOCATION OF HOLES 10⅜" OR 10¾"
CENTERED OVER VERTICAL STRUT
APPROX 5'-0"
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY
SEE DETAIL "A"
LOCATION OF SPLICE PLATES ON TOP CHORD
SEE DETAIL "C"
11¾" OR 1'-0⅛"
LOCATION OF SPLICE PLATES ON BOTTOM CHORD
ARC WELD THROUGH COVER PLATE
TOP CHORD SPLICE PLATE SP1
32" TRUSS
COVER PLATE
TOP VIEW DETAIL "A"
2"x¼"x 0'-9" SPLICE PLATE SP1
ARC WELD CONTRACT 223.00
DETAIL "A"
¼"x½" FILLET WELD WTC 223.00
SECTION D-D
COVER PLATE C
COVER PLATE B
2" LAP
DETAIL "D"
COVER PLATE B
COVER PLATE A
DETAIL "E"
COVER PLATES 28 GA. THICK
ARC WELD WTC 22300 (¼"x 2") EA SIDE
DETAIL "C"
WELD WTC 22300
3"x⅜"x 0'-4½" SPLICE PLATE MK. SP2
SECTION E-E
1'-9"
COVER PLATE C
END STIFFENER
LAP
COVER PLATE B
DETAIL "F"
2'-2½" TO 6"
NOTCH
END STIFFENER
COVER PLATE A
DETAIL "G"
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00
#8 S.A.
ARC WELD W.T.C. 223.00
V3 OR V4
A2 OR A3
DETAIL "B" WHEN APPLICABLE
DETAIL B1 WHEN APPLICABLE
#8 SHEAR ANCHOR
TRUSS
TOP VIEW-DETAIL "B"
MK A2 3"x2"x¼" ANGLE
MK A3
SEE DETAIL "J"
SECTION A-A
END SUPPORT ANGLES
EXT. COL. REF. LINE
6'-2½"
6'-8"
3'-4"
MIN. LENGTH OF ⅝ WELD = 4" W.T.C. 223.00
5/16" ARC WELD MIN 6" LONG W.T.C. 223.00
STUDS @ 6" O/C W.T.C. 230.00
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00
STUDS W.T.C. 230.00
W.T.C. 214.00
4½"
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4½" ABOVE COLUMN CLIPS FOR TRUSS BEARING
CORE END
COL. END
3"x2" ALTERNATES @ 6'-8" WITH BRDG TRUSSES
¼"x1½" FILLET WELD WTC 223
3"x2"x¼" BRIDGING ANGLE
SECTION G-G
ARC WELD W.T.C. 223.00
BRIDGING TRUSS
SECTION F-F
2"x1½"x¼"x 0'-6" CLIP ANGLE C1
¼"x1⅛" WELD W.T.C. 223.00
SECTION C-C
BRIDGING TRUSS (SEE DETAIL OF BRIDGING ABOVE)
24"
COVER PLACE & SPLICE PLATE SP1 PLACED IN FIELD (TYP OPP HAND)
¾"x 0'-6" CONNECTION BAR, PLACED IN FIELD (SEE SECTION H-H)
ANGLE CLIP C1
SPLICE PLATE SP2 PLACED IN FIELD (TYP OPP HAND)
SECTION B-B
TOP OR BOTTOM CHORD
¾"x 0'-8" CONNECTION BAR (CB)
¼"x 2½" ARC WELD W.T.C. 223.00
TYPICAL CONNECTION
LATERAL CONNECTION OF 24" TRUSSES
W.T.C. 223.00
TOP OR BOTTOM CHORD
¾" CONNECTION BAR (CB)
SECTION H-H
ARC WELD W.T.C. 223
ANGLE CLIP C1
BRIDGING TRUSS
¼"x½" WELD W.T.C. 223.00
32" TRUSS
DETAIL "H"
3"x2" ANGLE A1
2"x¼"x 0'-6" SPLICE PLATE SP5
ARC WELDS W.T.C. 223.00
TYPICAL CONNECTION
LATERAL CONNECTION OF 3"x2" ANGLES.
℄ TRUSS
¼"x1½" FILLET WELD W.T.C. 223.00
3"x2"x¼" A
DETAIL "J"
END SUPPORT ANGLE ATTACHMENT

REQUIRED MATERIAL PER PANEL				REF. DRWG
MATERIAL	MK.	PCS.	SIZE	
FLOOR TRUSSES	TIE	6	C32TIE - 59'-3"	ST201E
BRIDGING TRUSSES	TII	4	24" - 19'-11"	ST211
3"x2"x¼" ANGLE	A1	5	3"x2"x¼"x 19'-11"	ST 400
	A2	4	3"x2"x¼"x 5'-11⅝"	ST 400
	A3	2	3"x2"x¼"x 5'-11½"	ST 400
DIAGONAL FLATS	F1	6	1⅛"x⅜"x 6'-8"	ST 400
SPLICE PLATES	SP1	3	2"x¼"x 0'-9"	CD201
	SP2	36	3"x⅜"x 0'-4½"	CD201
	SP5	10	2"x¼"x 0'-6"	CD201
COVER PLATES	A	4	9"x.0135"x 13'-11½"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2½"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1½"x¼"x 0'-6"	CD201
#8 SHEAR ANCHOR	SA	12	#8 REBAR x 0'-8"	CD201
DAMPING SADDLE	DUS-1	2	3½"x3½"x⅜"x 3'-7⅜"	ST298
	DUS-2	2	3½"x3½"x⅜"x 3'-7⅜"	ST298
CONNECTION BAR	CB	32	¾"#x 0'-6"	CD201

℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE ¼" x 1" FILLET WELDS A = ¼" B = ¼"

REF DRWG	
7-AB4-3 & 3.1	1-3-68
7-AB4-15 & 16	1-3-68
7-AB4-39-42	1-3-68
SA-124	10-20-67
7-AB3-2	1-3-68
7-AB1-2	2-15-68
7-AB2-8	2-15-68

VOID

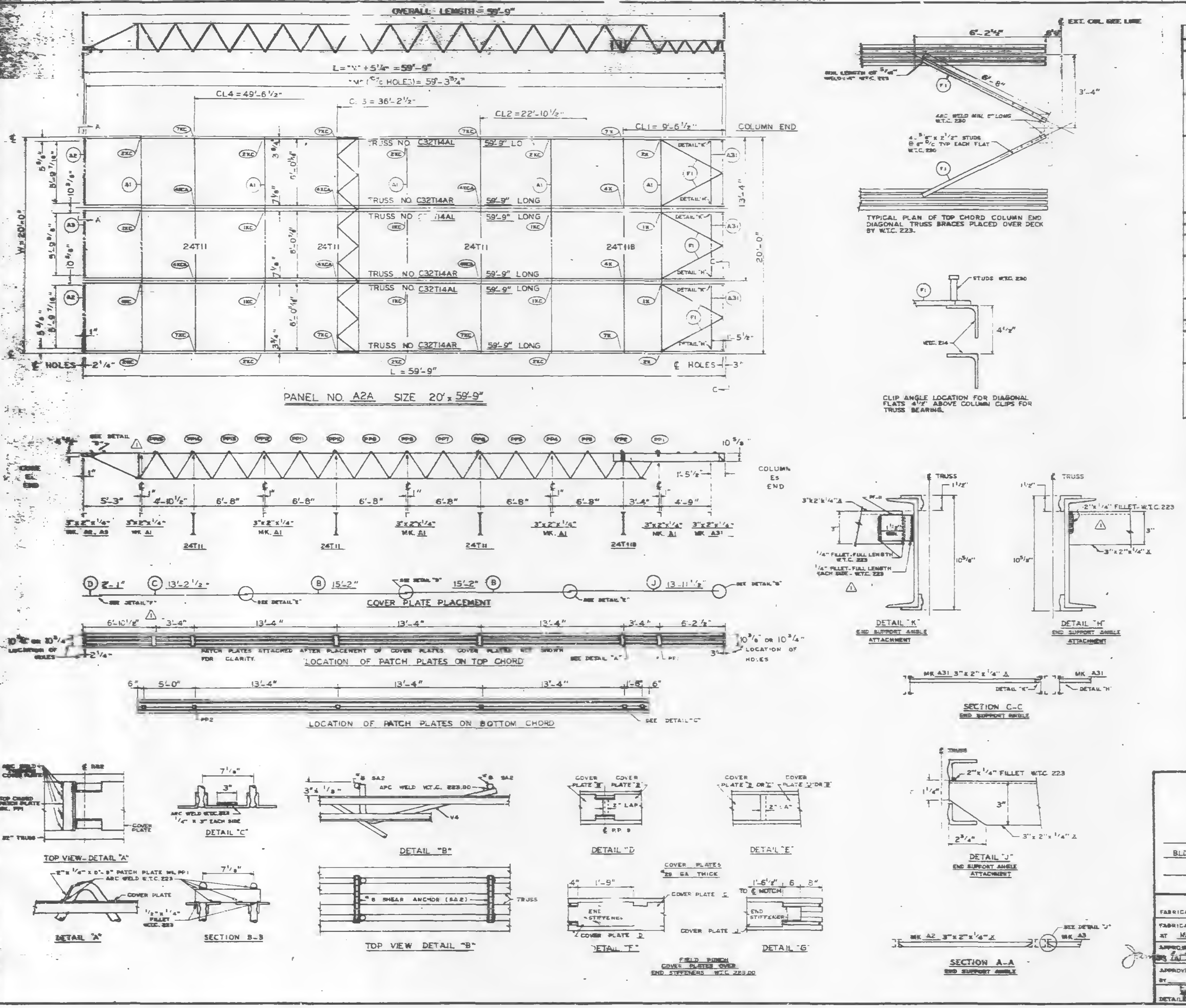
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 11-12 (SOUTH)

PANEL AIE - 20'-0" x 59'-3"

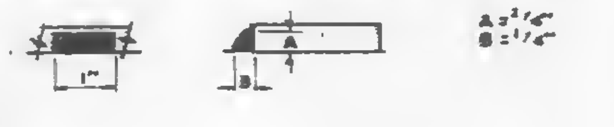
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB3-3 2-15-68 PLATE ____	
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE ____	DRAWN BY ____ DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE ____	CHECKED BY J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO FP AIE


OVERALL LENGTH = 59'-9"
L = 59'-9"
CL4 = 49'-6 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-10 1/2"
CL1 = 9'-6 1/2"
COLUMN END
TRUSS NO. C32T14AL 59'-9" LONG
TRUSS NO. C32T14AR 59'-9" LONG
24T11
24T11B
W = 20'-0"
13'-4"
20'-0"
℄ HOLES 2 1/4"
PANEL NO. A2A SIZE 20' x 59'-9"
5'-3"
4'-10 1/2"
6'-8"
3'-4"
4'-9"
10 5/8"
COLUMN ES END
COVER PLATE PLACEMENT
LOCATION OF PATCH PLATES ON TOP CHORD
PATCH PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY.
LOCATION OF PATCH PLATES ON BOTTOM CHORD
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.
DETAIL "K" END SUPPORT ANGLE ATTACHMENT
DETAIL "H" END SUPPORT ANGLE ATTACHMENT
SECTION C-C END SUPPORT ANGLE
DETAIL "J" END SUPPORT ANGLE ATTACHMENT
SECTION A-A END SUPPORT ANGLE
TOP VIEW - DETAIL "A"
DETAIL "C"
DETAIL "B"
DETAIL "D"
DETAIL "E"
DETAIL "A"
SECTION B-B
TOP VIEW DETAIL "B"
DETAIL "F"
DETAIL "G"
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00
#8 SHEAR ANCHOR (SA2)

REQUIRED MATERIAL PER PANEL				REF. DRWG.
MATERIAL	MK.	PCS.	SIZE	
FLOOR TRUSSES	[illegible]	3	C32T14AL x 59'-9"	[illegible]
	[illegible]	3	C32T14AR x 59'-9"	[illegible]
BRIDGING TRUSSES	T11	3	24T11 x 19'-11"	ST 211
	T11B	1	24T11B x 9'-11"	ST 211B
3" x 2" x 1/4" ANGLE	A1	5	3" x 2" x 1/4" x 19'-11"	ST 403
	A2	2	3" x 2" x 1/4" x 5'-11 3/4"	ST 403
	A3	1	3" x 2" x 1/4" x 5'-11 3/4"	ST 403
	A31	3	3" x 2" x 1/4" x 5'-8 1/8"	ST 410
CLOSURE PLATES	PF-11	3	3" x 1/4" x 0'-2 3/8"	ST 412
DIAGONAL FLATS	F1	6	1 1/2" x 3/8" x 6'-8"	ST 402
PATCH PLATES	PP1	24	2" x 1/4" x 0'-9"	ST 400
	PP2	24	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	8	9" x .0135" x 15'-2"	ST 303
	C	4	9" x .0135" x 13'-2 1/2"	ST 303
	D	4	9" x .0135" x 2'-1"	ST 303
	J	4	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	24	2" x 1 1/2" x .25" x 0'-6"	ST 400
#8 SHEAR ANCHOR	SA2	8	#8 REBAR x 0'-9"	ST 400
CONNECTION BAR	CB1	10	1" ø x 1'-3"	ST 400
CONNECTION PLATES	P1	8	3 1/2" x 3/8" x 0'-6 1/2"	ST 400
	P2	8	4 1/2" x .39" x 0'-9"	ST 400
	P3	8	4 1/2" x .39" x 1'-0"	ST 400
	P9	8	3" x 1/2" x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, i.e., (1X).
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 228.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1" x 1/4" FULL THROAT FILLET.



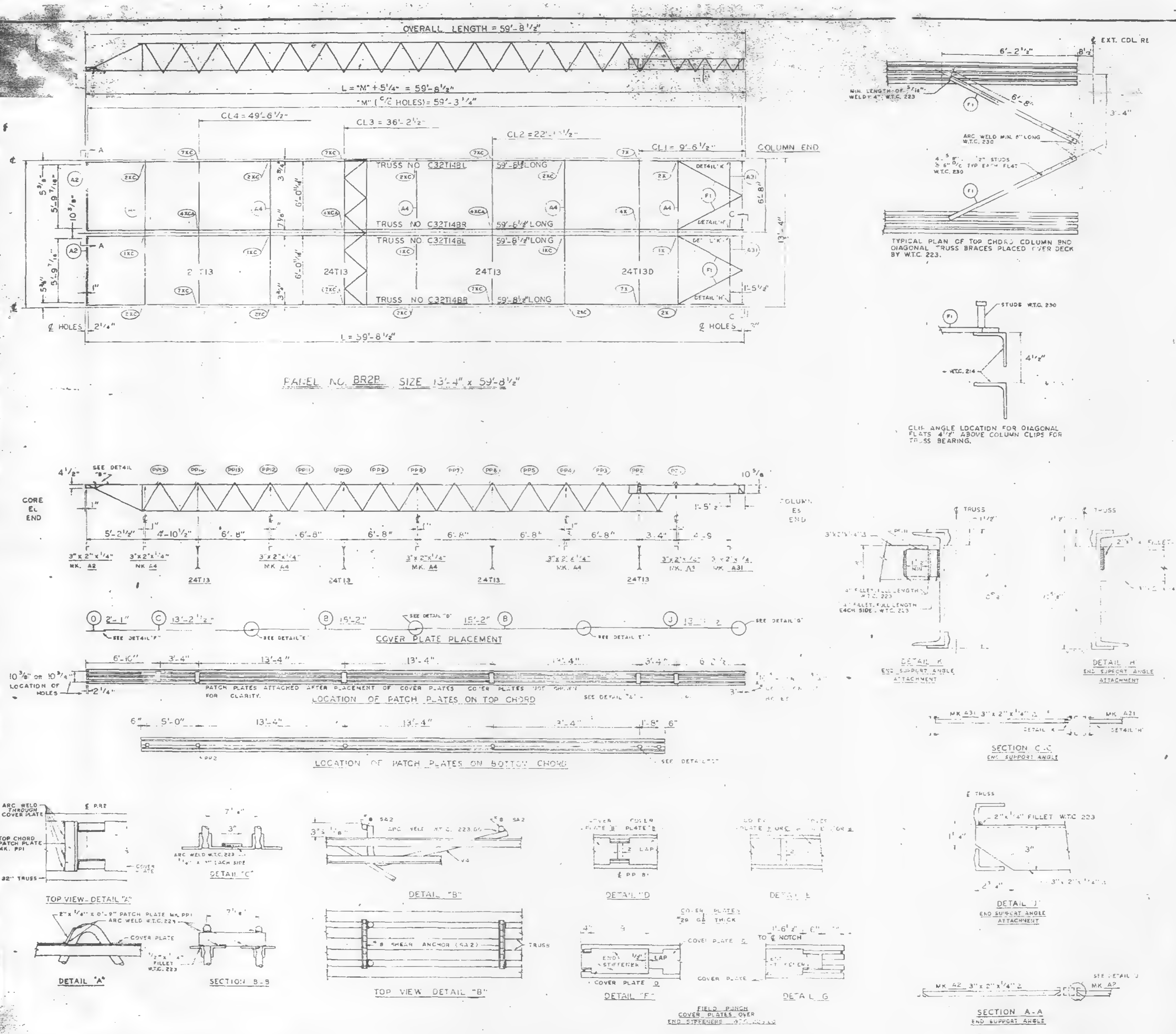
NO.	DATE	REVISION	BY
⚠1	2-4-69	AS NOTED	G.D.C.

REF. DRWG.		
	7-AB3-25	10-4-68
	7-AB3-24	8-15-68
	7-AB1-13	10-4-68
	7-AB2-5	7-22-68
	7-AB2-15	10-4-68

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 25 (NORTH & SOUTH) 59 (NORTH)
⚠1
PANEL A2A - 20' x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE
DRAWN BY
DATE DEC. 5, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.R. CHUBB
DATE DEC. 5, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
DETAILED BY
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. FP A2A



OVERALL LENGTH = 59'-8 1/2"
L = "M" + 5 1/4" = 59'-8 1/2"
"M" (C/C HOLES) = 59'-3 1/4"
CL4 = 49'-6 1/2"
CL3 = 36'-2 1/2"
CL2 = 22'-1 1/2"
CL1 = 9'-6 1/2"
COLUMN END
TRUSS NO C32T14BL 59'-8 1/2" LONG
TRUSS NO C32T14BR 59'-8 1/2" LONG
TRUSS NO C32T14BL 59'-8 1/2" LONG
TRUSS NO C32T14BR 59'-8 1/2" LONG
24T13
24T13D
DETAIL "K"
DETAIL "H"
13'-4"
℄ HOLES 2 1/4"
L = 59'-8 1/2"
PANEL NO. BR2B SIZE 13'-4" x 59'-8 1/2"
℄ EXT. COL RE
6'-2 1/2"
3'-4"
MIN. LENGTH OF 3/16" WELD 4" W.T.C. 223
ARC WELD MIN. 6" LONG W.T.C. 230
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.
STUDS W.T.C. 230
W.T.C. 214
4 1/2"
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.
SEE DETAIL "B"
CORE EL END
COLUMN ES END
5'-2 1/2"
4'-10 1/2"
6'-8"
3'x2"x1/4" MK. A2
3'x2"x1/4" MK. A4
3'x2"x1/4" MK. A31
COVER PLATE PLACEMENT
SEE DETAIL "F"
SEE DETAIL "E"
SEE DETAIL "D"
SEE DETAIL "G"
10 3/8" OR 10 3/4" LOCATION OF HOLES
PATCH PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY.
LOCATION OF PATCH PLATES ON TOP CHORD
LOCATION OF PATCH PLATES ON BOTTOM CHORD
DETAIL "K" END SUPPORT ANGLE ATTACHMENT
DETAIL "H" END SUPPORT ANGLE ATTACHMENT
SECTION C-C END SUPPORT ANGLE
TOP VIEW - DETAIL "A"
DETAIL "C"
DETAIL "B"
DETAIL "D"
DETAIL "E"
DETAIL "J" END SUPPORT ANGLE ATTACHMENT
DETAIL "A"
SECTION B-B
TOP VIEW DETAIL "B"
#8 SHEAR ANCHOR (SA2)
DETAIL "F"
FIELD PUNCH COVER PLATES OVER END STIFFENERS
DETAIL "G"
SECTION A-A END SUPPORT ANGLE

REQUIRED MATERIAL PER PANEL				REF. DRWG.
MATERIAL	MK.	PCS.	SIZE	
FLOOR TRUSSES	T14BL	2	C32T14BL x 59'-8 1/2"	ST 214BL
	T14BR	2	C32T14BR x 59'-8 1/2"	ST 214BL
BRIDGING TRUSSES	T13	3	24T13 x 13'-3"	BT 213
	T13D	1	24T13D x 13'-3"	BT 213D
3" x 2" x 1/4" ANGLE	A2	2	3" x 2" x 1/4" x 5'-11 9/16"	ST 403
	A4	5	3" x 2" x 1/4" x 13'-3"	ST 403
	A31	2	3" x 2" x 1/4" x 5'-8 1/8"	ST 410
CLOSURE PLATES	PF-11	2	3" x 1/4" x 0'-2 3/8"	ST 412
DIAGONAL FLATS	F1	4	1 1/2" x 5/8" x 6'-8"	ST 402
PATCH PLATES	PP1	12	2" x 1/4" x 0'-9"	ST 400
	PP2	12	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	4	9" x .0135" x 15'-2"	ST 303
	C	2	9" x .0135" x 13'-2 1/2"	ST 303
	D	2	9" x .0135" x 2'-1"	ST 303
	J	2	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	16	2" x 1 1/2" x .25" x 6"	ST 400
#8 SHEAR ANCHOR	SA2	4	#8 REBAR x 0'-9"	ST 400
CONNECTION BAR	CB1	5	1" ø x 1'-3"	ST 400
CONNECTION PLATES	P1	4	3 1/2" x 3/8" x 0'-6 1/2"	ST 400
	P2	4	4 1/2" x .39" x 0'-9"	ST 400
	P3	4	4 1/2" x .39" x 1'-0"	ST 400
	P9	4	3" x 1/2" x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, ie. (1X)
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1" x 1/4" FULL THROAT FILLET.

A = 1/4"
B = 1/4"

NO.	DATE	REVISION	BY

REF DRWG.		
	7-AB3-27	10-4-68
	7-AB1-13	10-4-68
	7-AB2-8	7-22-68
	7-AB4-28	7-22-68
	SA-124	10-11-68
	7-AB3-24	8-15-68

Void

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

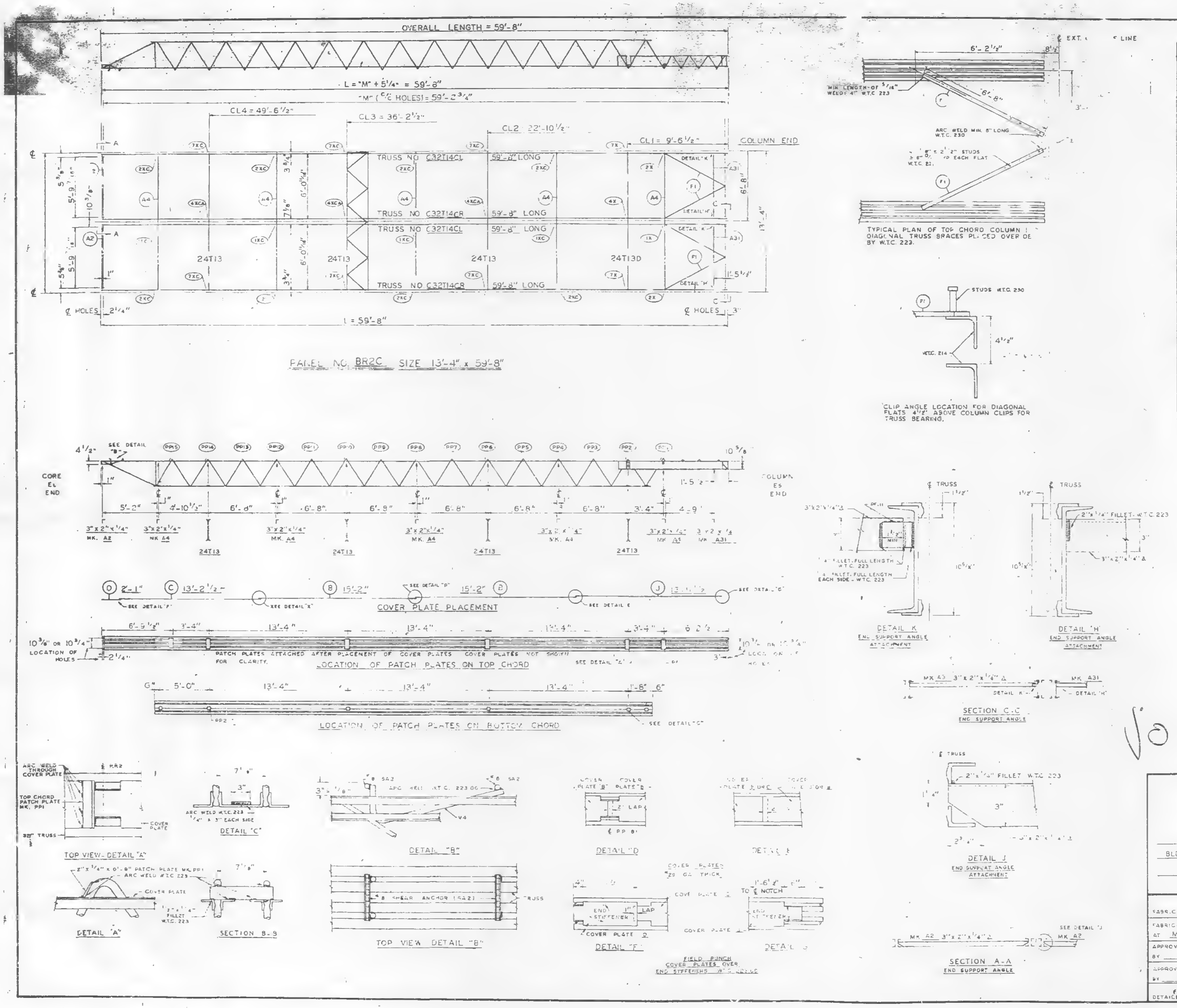
BLDG. A FLOORS 92 (NORTH)

PANEL BR2B-13'-4" x 59'-8 1/2"

FABRICATION BY LACLEDE STEEL COMPANY

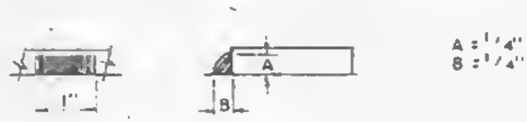
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-27	PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A.	DATE	DRAWN BY L.B. DATE APRIL 28, 1969	
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR	DATE	CHECKED BY T.N. CHURA DATE APRIL 28, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO FP BR2B

LACLEDE STEEL CO.


OVERALL LENGTH = 59'-8"
L = "M" + 5 1/4" = 59'-8"
"M" (C/C HOLES) = 59'-2 3/4"
CL4 = 49'-6 1/2"
CL3 = 36'-2 1/2"
CL2 22'-10 1/2"
CL1 = 9'-6 1/2"
COLUMN END
TRUSS NO C32T14CL 59'-8" LONG
TRUSS NO C32T14CR 59'-8" LONG
TRUSS NO C32T14CL 59'-8" LONG
TRUSS NO C32T14CR 59'-8" LONG
24T13
24T13
24T13
24T13D
DETAIL "K"
DETAIL "H"
13'-4"
℄ HOLES 2 1/4"
℄ HOLES 3"
L = 59'-8"
PANEL NO. BR2C SIZE 13'-4" x 59'-8"
CORE EL END
COLUMN ES END
COVER PLATE PLACEMENT
PATCH PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY.
LOCATION OF PATCH PLATES ON TOP CHORD
LOCATION OF PATCH PLATES ON BOTTOM CHORD
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DE BY W.T.C. 223.
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.
DETAIL K END SUPPORT ANGLE ATTACHMENT
DETAIL H END SUPPORT ANGLE ATTACHMENT
SECTION C-C END SUPPORT ANGLE
DETAIL J END SUPPORT ANGLE ATTACHMENT
SECTION A-A END SUPPORT ANGLE
TOP VIEW DETAIL "A"
DETAIL "C"
DETAIL "B"
DETAIL "D"
DETAIL E
DETAIL "A"
SECTION B-B
TOP VIEW DETAIL "B"
DETAIL "F"
DETAIL G
FIELD PUNCH COVER PLATES OVER END STIFFENERS

REQUIRED MATERIAL PER PANEL				REF. DRWG.
MATERIAL	MK.	PCS.	SIZE	
FLOOR TRUSSES	T14CL	2	C32T14CL x 59'-8"	ST 214CL
	T14CR	2	C32T14CR x 59'-8"	ST 214CL
BRIDGING TRUSSES	T13	3	24T13 x 13'-3"	ST 213
	T13D	1	24T13D x 13'-3"	ST 213D
3"x 2"x 1/4" ANGLE	A2	2	3"x2"x1/4"x 5'-11 3/16"	ST 403
	A4	5	3"x2"x1/4"x 13'-3"	ST 403
	A31	2	3"x 2"x 1/4"x 5'-8 1/8"	ST 410
CLOSURE PLATES	PF-11	2	3" x 1/4" x 0'-2 3/8"	ST 412
DIAGONAL FLATS	F1	4	1 1/2" x 5/8" x 5'-8"	ST 402
PATCH PLATES	PP1	12	2" x 1/4" x 0'-9"	ST 400
	PP2	12	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	4	9" x .0135" x 15'-2"	ST 303
	C	2	9" x .0135" x 13'-2 1/2"	ST 303
	D	2	9" x .0135" x 2'-1"	ST 303
	J	2	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	16	2" x 1 1/2" x .25" x 6"	ST 400
#8 SHEAR ANCHOR	SA2	4	#8 REBAR x 0'-9"	ST 400
CONNECTION BAR	CB1	5	1" ø x 1'-3"	ST 400
CONNECTION PLATES	P1	4	3 1/2" x 3/8" x 0'-6 1/2"	ST 400
	P2	4	4 1/2" x .39" x 0'-9"	ST 400
	P3	4	4 1/2" x .39" x 1'-0"	ST 400
	P9	4	3" x 1/2" x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, ie., (1X)
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1"x1/4" FULL THROAT FILLET.



NO.	DATE	REVISION	BY

VOID

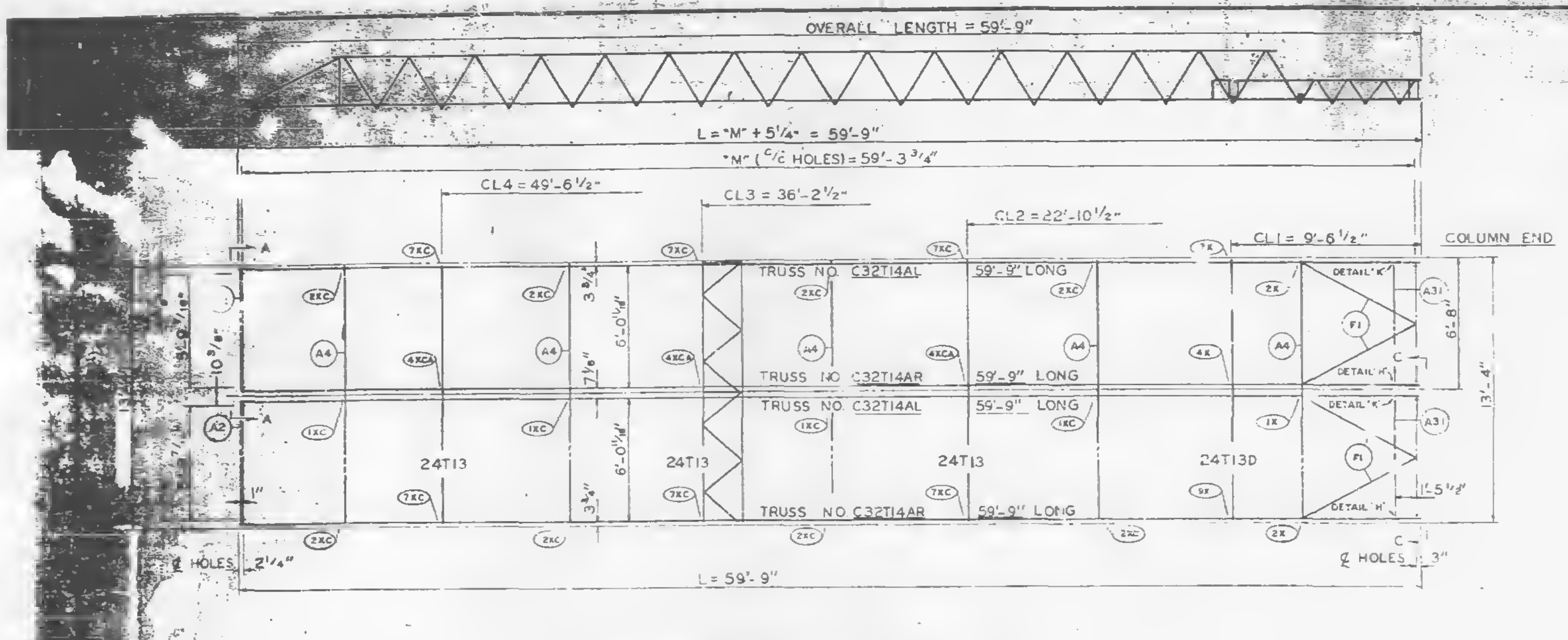
REF DRWG.		
	7-A83-27	10-4-68
	7-A81-13	10-4-68
	7-A82-8	7-22-68
	7-A84-28	7-22-68
	SA-124	10-11-68
	7-A83-24	8-15-68

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

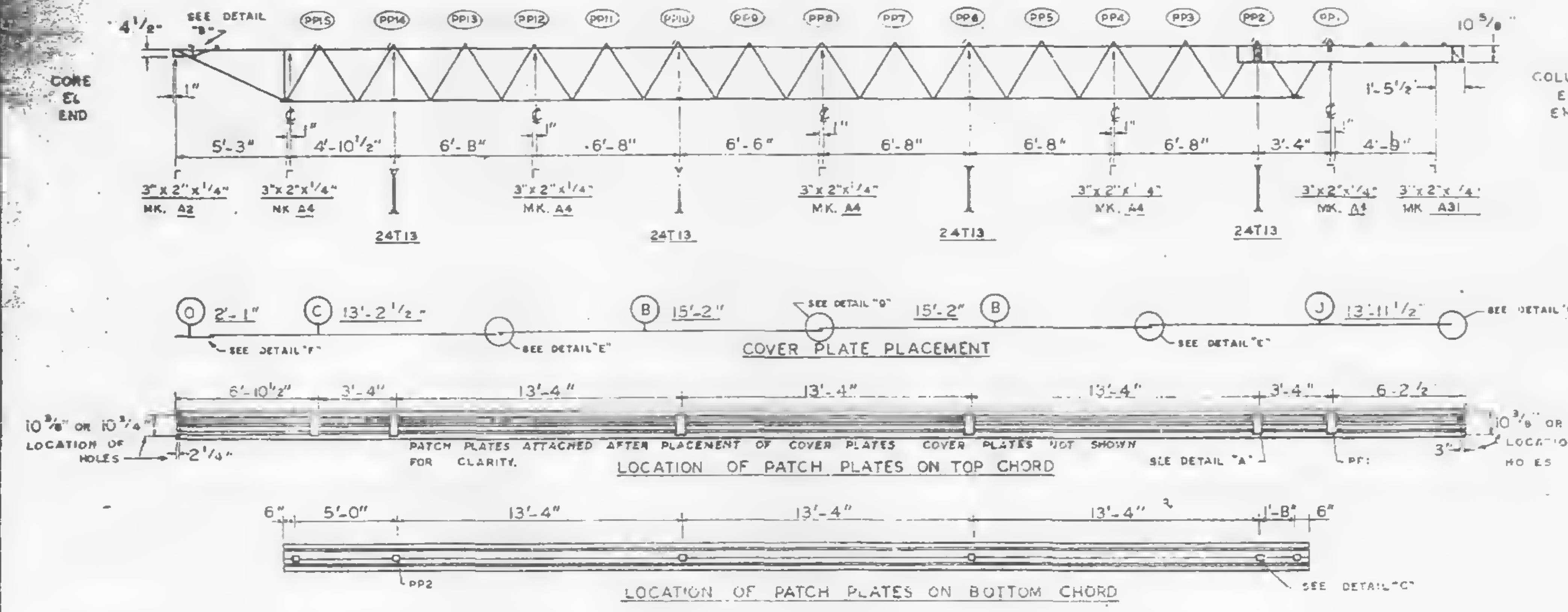
BLDG. A FLOORS 59 & 92 (SOUTH)

PANEL BR2C-13'-4"x 59'-8"

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-A83-27 PLATE
APPROVED FOR FABRICATION BY ______ FOR P.O.N.Y.A. DATE
DRAWN BY luh
DATE APRIL 28, 1969
APPROVED FOR FABRICATION BY ______ FOR FABRICATOR DATE
CHECKED BY T.M. CHUBA
DATE APRIL 28, 1969
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO W.T.C. 221
SHEET NO FP BR2C



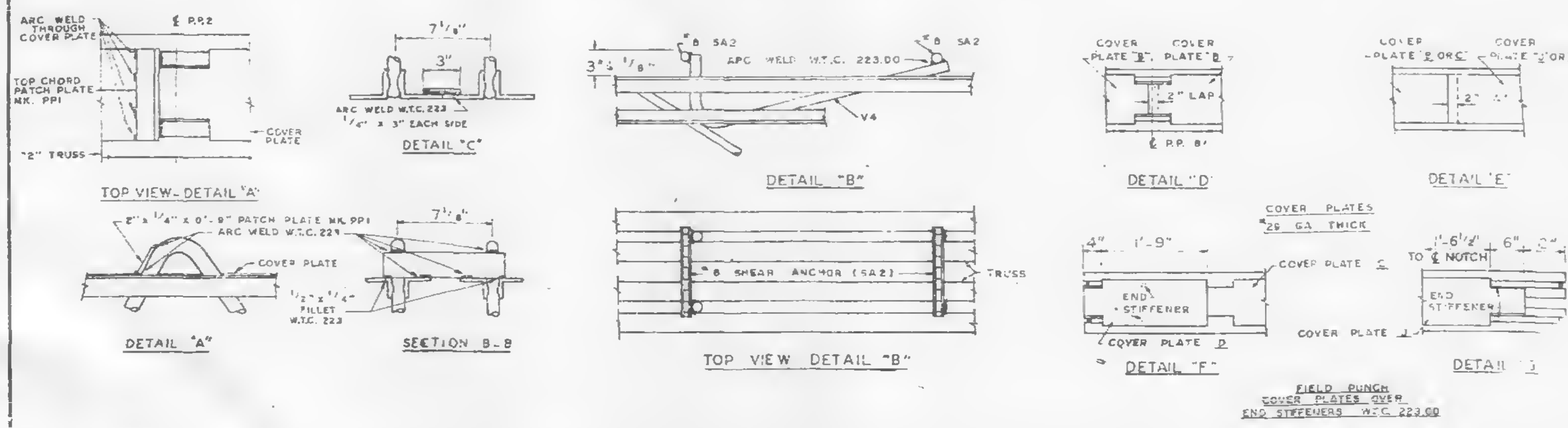
PANEL NO. B7A SIZE 13'-4" x 59'-9"

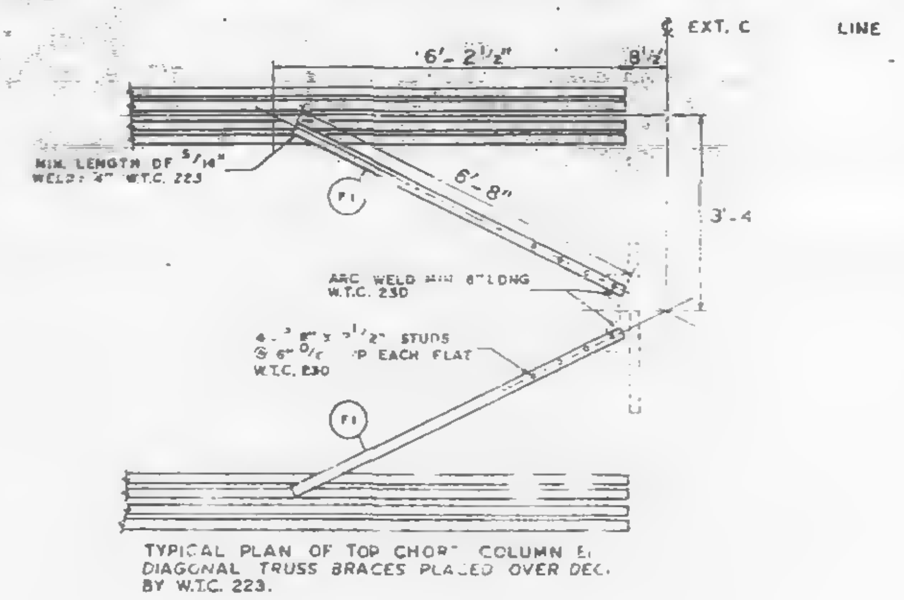


COVER PLATE PLACEMENT

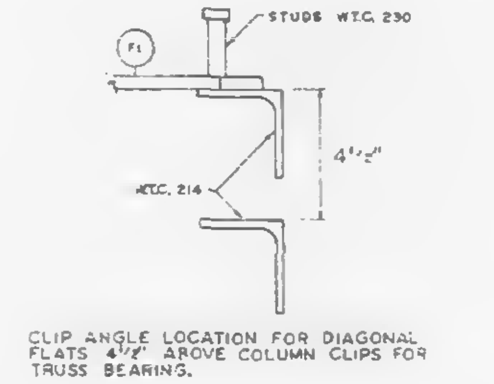
LOCATION OF PATCH PLATES ON TOP CHORD

LOCATION OF PATCH PLATES ON BOTTOM CHORD

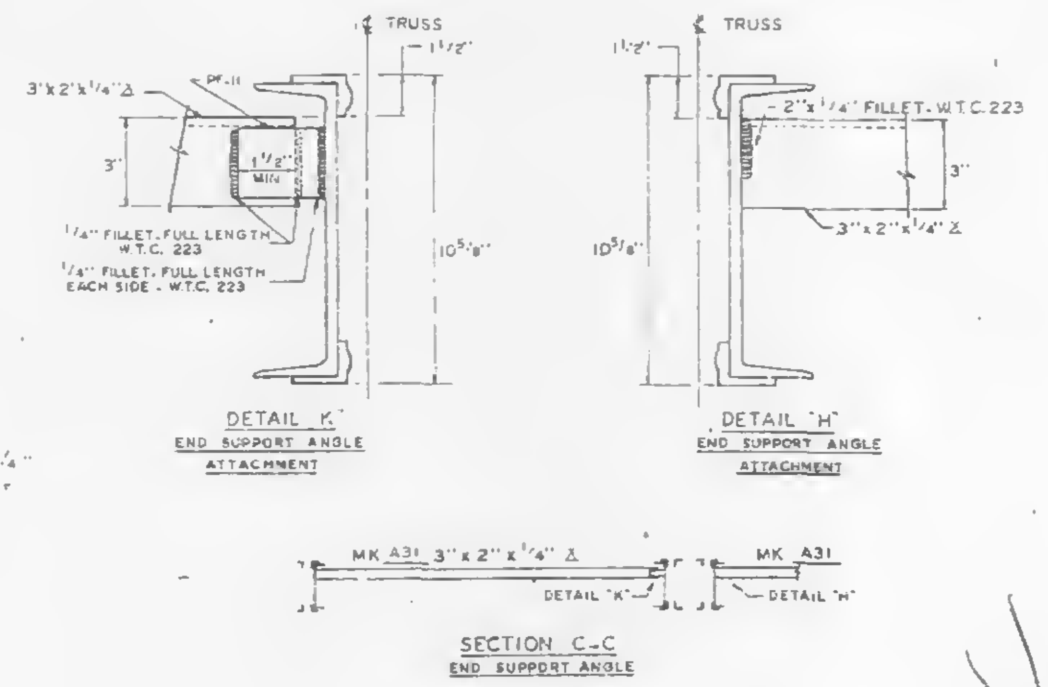


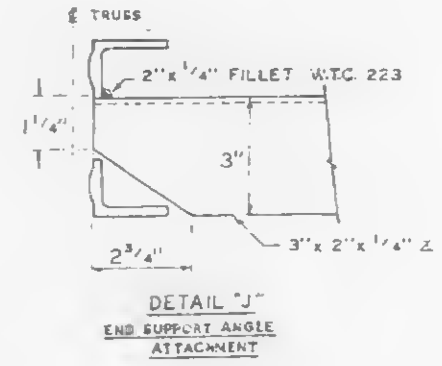

℄ EXT. C LINE
6'-2 1/2"
6'-8"
MIN. LENGTH OF 5/16" WELD 4" W.T.C. 223
ARC WELD MIN 6" LONG W.T.C. 230
STUDS EACH FLAT W.T.C. 230
F1

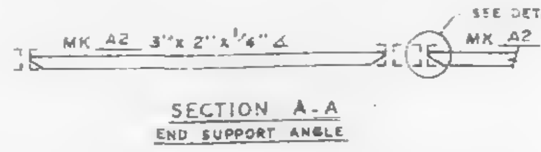
TYPICAL PLAN OF TOP CHORD COLUMN E5 DIAGONAL TRUSS BRACES PLACED OVER DEC. BY W.T.C. 223.



CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.


℄ TRUSS
3'x2'x1/4' ∠
PF-11
1/4" FILLET, FULL LENGTH W.T.C. 223
1/4" FILLET, FULL LENGTH EACH SIDE - W.T.C. 223
10 5/8"
DETAIL "K"
END SUPPORT ANGLE ATTACHMENT
2"x1/4" FILLET - W.T.C. 223
3"x2"x1/4" ∠
DETAIL "H"
END SUPPORT ANGLE ATTACHMENT
MK A31 3"x2"x1/4" ∠
DETAIL "K"
DETAIL "H"
SECTION C-C
END SUPPORT ANGLE





REQUIRED MATERIAL PER PANEL				REF.
MATERIAL	MK.	PCS.	SIZE	DRWG.
FLOOR TRUSSES	T14AL	2	C32T14AL x 59'-9"	ST 214AL
	T14AR	2	C32T14AR x 59'-9"	ST 214AL
BRIDGING TRUSSES	T13	3	24T13 x 13'-3"	BT 213
	T13D	1	24T13D x 13'-3"	BT 213D
3"x 2"x 1/4" ANGLE	A2	2	3"x2"x1/4"x5'-11 9/16"	ST 403
	A4	5	3"x2"x1/4"x13'-3"	ST 403
	A31	2	3"x2"x1/4"x5'-8 1/8"	ST 410
CLOSURE PLATES	PF-11	2	3" x 1/4" x 0'-2 3/8"	ST 412
DIAGONAL FLATS	F1	4	1 1/2" x 5/8" x 6'-8"	ST 402
PATCH PLATES	PP1	12	2" x 1/4" x 0'-9"	ST 400
	PP2	12	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	4	9" x .0135" x 15'-2"	ST 303
	C	2	9" x .0135" x 13'-2 1/2"	ST 303
	D	2	9" x .0135" x 2'-1"	ST 303
	J	2	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	16	2" x 1 1/2" x .25" x 6"	ST 400
#8 SHEAR ANCHOR	SA2	4	#8 REBAR x 0'-9"	ST 400
CONNECTION BAR	CB1	5	1" ø x 1'-3"	ST 400
CONNECTION PLATES	P1	4	3 1/2" x 3/8" x 0'-6 1/2"	ST 400
	P2	4	4 1/2" x .39" x 0'-9"	ST 400
	P3	4	4 1/2" x .39" x 1'-0"	ST 400
	P9	4	3" x 1/2" x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, ie., (1X).
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1"x1/4" FULL THROAT FILLET.

A = 1/4"
B = 1/4"

NO.	DATE	REVISION	BY

VOID

REF DRWG.		
	7-AB3-26	10-4-68
	7-AB1-13	10-4-68
	7-AB2-8	7-22-68
	7-AB4-28	7-22-68
	58-124	3-24-69
	7-AB3-24	8-15-68

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. B FLOORS 25 (EAST & WEST) 59 (WEST)

PANEL B7A - 13'-4" x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO 7-AB3-26 PLATE	
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE	DRAWN BY [illegible] DATE MAY 8, 1969	
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY T.N. CHURA DATE MAY 8, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY [illegible]	FABRICATION CONT NO W.T.C. 221	SHEET NO FP B7A